VEHICLE ASSEMBLY BUILDING AREA

Thermal Processing Facility (SWMU 040)
West Crawler Park Site (SWMU 044)
Mobile Launch Platform/Vehicle Assembly Building (SWMU 056)
C-5 Electrical Substation (SWMU 066)
Orbiter Processing Facilities 1 and 2 (SWMU 072)
KSC Press Site (SWMU 074)
Former Development and Testing Laboratory (SWMU 075)
Former Saturn-V Rocket Display (SWMU 080)
Shuttle Flight Operations Contract Generator Maintenance Facility (SWMU 081)
Orbiter Processing Facility 3 (SWMU 083)
Processing Control Center Area (SWMU 101)
Fire Station 6 (SWMU 106)
Mission Support Building Area (SWMU 108)

2016 BIENNIAL GROUNDWATER MONITORING RESULTS KENNEDY SPACE CENTER, FLORIDA

Prepared for:



National Aeronautics and Space Administration Kennedy Space Center, Florida

November 2016 Revision 0

Prepared by:

Geosyntec Consultants 316 South Baylen Street, Suite 201 Pensacola, Florida 32502 (850) 477-6547

PROFESSIONAL CERTIFICATION AND APPROVAL

Based on the information contained in the attached document titled *Vehicle Assembly Building Area (SWMUs 40, 44, 56, 66, 72, 74, 75, 80, 81, 83, 101,106 and 108) 2016 Biennial Groundwater Monitoring Results, Kennedy Space Center, Florida* dated September 2016, I hereby certify that the scope of work described in the above-referenced document was performed in accordance with appropriate hydrogeologic standards of practice.

Jill W. Johnson, P.G./Date Florida Professional Geologist License No. 2376 Geosyntec Consultants, Inc.

> Telephone: 850.483.5100 Facsimile: 850.477.6707

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ABBREVIATIONS AND ACRONYMS

μg/L micrograms per liter
 C5ES C-5 Electrical Substation
 cDCE cis-1,2-Dichloroethene
 DO Dissolved Oxygen

EPA Environmental Protection Agency

FDEP Florida Department of Environmental Protection

GCTL Groundwater Cleanup Target Level

Geosyntec Consultants

IGM Interim Groundwater Monitoring

KSC Kennedy Space Center LTM Long-Term Monitoring

MAROS Monitoring and Remediation Optimization System
MLPV Mobile Launch Platform/Vehicle Assembly Building

MSBA Mission Support Building Area

NADC Natural Attenuation Default Concentration
NASA National Aeronautics and Space Administration

OP12 Orbiter Processing Facilities 1 and 2

OPF3 Orbiter Processing Facility 3
ORP Oxidation-Reduction Potential
PCCA Processing Control Center Area

PDB Passive Diffusion Bag

PRES KSC Press Site

RCRA Resource Conservation and Recovery Act

SAP Sampling and Analysis Plan SATV Former Saturn-V Rocket display

SFOC Shuttle Flight Operations Contract Generator Maintenance Facility Area

SOP Standard Operating Procedure SWMU Solid Waste Management Unit

TCE Trichloroethene

tDCE trans-1,2-Dichloroethene
TDS Total Dissolved Solids
TPF Thermal Processing Facility
VAB Vehicle Assembly Building

VC Vinyl Chloride

VOC Volatile Organic Compound WCPS West Crawler Park Site

EXECUTIVE SUMMARY

This document presents the findings of the 2016 Long-Term Monitoring (LTM) activities that were completed at the Vehicle Assembly Building (VAB) Area, located at the John F. Kennedy Space Center (KSC), Florida. This area includes Solid Waste Management Unit (SWMU) Numbers 40, 44, 56, 66, 72, 74, 75, 80, 81, 83, 101, 106 and 108 under KSC's Resource Conservation and Recovery Act (RCRA) Corrective Action program.

In 2016, two existing MLPV monitoring wells and eight existing FDTL monitoring wells were added to the LTM activities at the VAB Area.

During the May 2016 LTM event, groundwater samples were collected from 44 monitoring wells for analysis of volatile organic compounds (VOCs) using passive diffusion bags (PDB), two monitoring wells for analysis of VOCs using traditional low flow purging techniques, and two monitoring wells for total antimony, using traditional low flow purging techniques. Below is a summary of the area-specific recommendations that are made based on the 2016 results.

The following recommendations are made in the FS6 Area based on the May 2016 sampling event:

- Conduct sampling in November 2016 (end of wet season) in two wells for VOCs using low-flow sampling techniques.
- If VC results from the November sampling event are less than Groundwater Cleanup Target Levels (GCTL), propose No Further Action (NFA) for FS6 groundwater.
- If VC results from the November sampling event are greater than GCTL, resume biennial sampling with alternating seasons.

The following recommendations are made in the FDTL Area based on the May 2016 sampling event:

- Discontinue sampling at FDTL-IW13I because concentrations of TCE and VC have been below detection limits for three or more consecutive sampling events.
- Continue sampling seven wells for VOCs using PDBs on a biennial basis with alternating seasons (next event in Fall 2018).

The following recommendations are made in the C5ES Area based on the May 2016 sampling event:

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- Discontinue sampling C5ES-MW10I, C5ES-MW12S, and C5ES-MW12I because concentrations of VC have been below GCTL for at least two consecutive sampling events.
- Continue sampling three wells for VOCs using PDBs on a biennial basis with alternating seasons (next event in Fall 2018).

The following recommendations are made in the Shuttle Flight Operations Contract Generator Maintenance Facility (SFOC) Area based on the May 2016 sampling event:

- Continue sampling SFOC-IW1S and SFOC-IW4S for antimony on a biennial basis with alternating seasons (next event in Fall 2018).
- Prior to next sampling event, install a new monitoring well located adjacent to SFOC-IW1S (screened from 6 to 16 feet below land surface with 0.006-inch slot screen and fine sand filter pack) and sample on a biennial basis to evaluate if the results are more representative of the surficial aquifer conditions.

The following recommendations are made in the VAB Area based on the May 2016 sampling event.

- Discontinue sampling at one shallow well (PCCA-MW004), seven intermediate wells
 (MLPV-IW0006IR, MLPV-IW0012I, MLPV-IW0056, SATV-IW0009I, SATV-IW0010,
 PCCA-MW0017 and PRES-IW0007I), and seven deep wells (MLPV-IW0048, MLPV-IW0049, MLPV-IW0050, MLPV-IW0051, MLPV-IW0054, MLPV-IW0055, and PRES-IW0010) because concentrations of VC have been below GCTL for at least two consecutive sampling events.
- Continue sampling at 13 wells for VOCs using PDBs and two wells for VOCs using low flow purging techniques on a biennial basis with alternating seasons (next event in Fall 2018).
- Add two intermediate wells (SATV-IW0004I and VABU-IW0001I) and two deep wells (MLPV-IW0020D and VAB-IW0005D) to the VAB LTM sampling plan (next event in Fall 2018).

SECTION I

INTRODUCTION

1.1 BACKGROUND

This document presents the findings of the 2016 Long Term Monitoring (LTM) activities that were completed at the Vehicle Assembly Building (VAB) Area, located at the John F. Kennedy Space Center (KSC), Florida. The five areas that are monitored under this LTM program include Solid Waste Management Unit (SWMU) Numbers 40, 44, 56, 66, 72, 74, 75, 80, 81, 83, 101, 106, and 108 under KSC's Resource Conservation and Recovery Act (RCA) Corrective Action program. The SWMU locations and boundaries in each of the five areas described in Section 1.2 are presented on Figure 1-1, 1-2, and 1-3. Decision dates when each SWMU was included in the overall LTM for the VAB Area are presented in Table 1-1. Applicable Remediation Team Meeting minutes are included in Appendix A. LTM activities were performed in accordance with the recommendations presented in the *Vehicle Assembly Building Area 2014 Annual Long Term Monitoring Report* dated April 2015 and approved by the National Aeronautics and Space Administration (NASA) Remediation Team during the February 2013 Remediation Team meeting. This Annual LTM Report was prepared by Geosyntec Consultants (Geosyntec) for NASA under contract number NNK12CA13B, Delivery Order NNK13CA20T project number PCN ENV2188.

1.2 FACILITY LOCATION

The VAB Area is located within KSC on the east coast of Florida in Brevard County. Results for this sampling event are presented for five separate areas as shown on Figures 1-1 through 1-3. These are: Fire Station 6 (FS6) Area (SWMU No. 106), Former Development and Testing Laboratory (FDTL) Area (SWMU No. 75), C-5 Electrical Substation (C5ES) Area (SWMU No. 66), Shuttle Flight Operations Contract Generator Maintenance Facility (SFOC) Area (SWMU No. 81), and the VAB Area. The VAB Area includes the following sites: Thermal Processing Facility (TPF) (SWMU No. 40), the Mobile Launch Platform/Vehicle Assembly Building (MLPV) Area (SWMU No. 56), KSC Press Site (PRES) (SWMU No. 74), Former Saturn-V Rocket Display (SATV) (SWMU No. 80), West Crawler Park Site (WCPS) (SWMU No. 44), Orbiter Processing Facilities 1 and 2 (OP12) (SWMU No. 72), Orbiter Processing Facility 3 (OPF3) (SWMU No. 83), Processing Control Center Area (PCCA) (SWMU No. 101), and Mission Support Building Area (MSBA) (SWMU No. 108).

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1.3 PURPOSE

The purpose of this report is to present the results of the biennial LTM activities that were conducted at each of the five areas in May 2016. Additionally, this report provides recommendations for future monitoring in each area.

1.4 REPORT ORGANIZATION

The remainder of this report is organized as follows:

Section II: *Biennial Groundwater Sampling Activities*. This section describes the methodology used for the May 2016 biennial LTM event.

Section III: Fire Station 6 Area (SWMU 106) Results. This section provides a summary of the groundwater levels, laboratory analytical data collected and trend analysis for the FS6 Area.

Section IV: Former Development and Testing Laboratory Area (SWMU 75) Results. This section provides a summary of groundwater levels, laboratory analytical data collected, and trend analysis for the FDTL Area.

Section V: *C-5 Electrical Substation (SWMU 66) Area Results*. This section provides a summary of groundwater levels, laboratory analytical data collected, and trends analysis for the C5ES Area.

Section VI: Shuttle Flight Operations Contract Generator Maintenance Facility Area (SWMU 81) Results. This section provides a summary of groundwater levels, field measurements, laboratory analytical data collected, and trend analysis for the SFOC Area.

Section VII: Vehicle Assembly Building Area (SWMUs 40, 44, 56, 72, 74, 80, 83, 101, and 108) Results. This section provides a summary of the groundwater levels, field measurements, laboratory analytical data collected, trend analysis, and remediation and additional assessment activities for the VAB Area.

Section VIII: *Recommendations*. This section presents recommendations for future activities in each of the five areas.

Section IX: *References*. This section provides a listing of the documents used in developing this report.

Table 1-1. Decision Dates for Inclusion of Individual SWMUs into the VAB Area LTM Plan

SWMU/PRL Number	SWMU Name	Area	Decision Date			
66	C-5 Electrical Substation	C5ES	16-17 December 2004 Meeting			
81	Shuttle Flight Operations Contract Generator Maintenance Facility	SFOC	(to conduct LTM sampling and reporting as part of the VAB LTM program).			
40	Thermal Processing Facility		27-28 June 2006 Meeting (to enter the well into the LTM program for the VAB area) [Decision 0606-D29]			
44	West Crawler Park Site	16-17 December 2				
56	Mobile Launch Platform/Vehicle Assembly Building Area		22 October 2015 Meeting (to sample SAMW0001 and SAMW0002) [Decision 1510-D03]			
72	Orbiter Processing Facilities 1 and 2		9-10 November 2004 Meeting (to sample with VAB) [Decision 0411-D03]			
74	KSC Press Site	VAB	19-20 November 2002 Meeting (to group with VAB monitoring program) [Decision 0211-D05]			
80	Former Saturn-V Rocket Display		28 August 2002 Meeting (to group with VAB monitoring program) [Decision 0208-D01]			
83	Orbiter Processing Facility 3		16-17 December 2004 Meeting (to group with VAB monitoring program) [Decision 0412-D06]			
101	Processing Control Center Area		7 March 2008 Meeting (to conduct LTM sampling with the addition of ORP to field parameters) [Decision 0803-D06]			
108	Mission Support Building Area		7-8 December 2011 (to incorporate into the VAB monitoring program [Decision 1112-D12]			
106	Fire Station 6 Area	FS6	31 January 2013 Meeting (to incorporate into the VAB monitoring program) [Decision 1321-D28]			
75	Former Development Testing Lab Area	FDTL	18-19 November 2014 Meeting (to continue long-term groundwater monitoring on a biennial frequency) [Decision 1411-D35]			

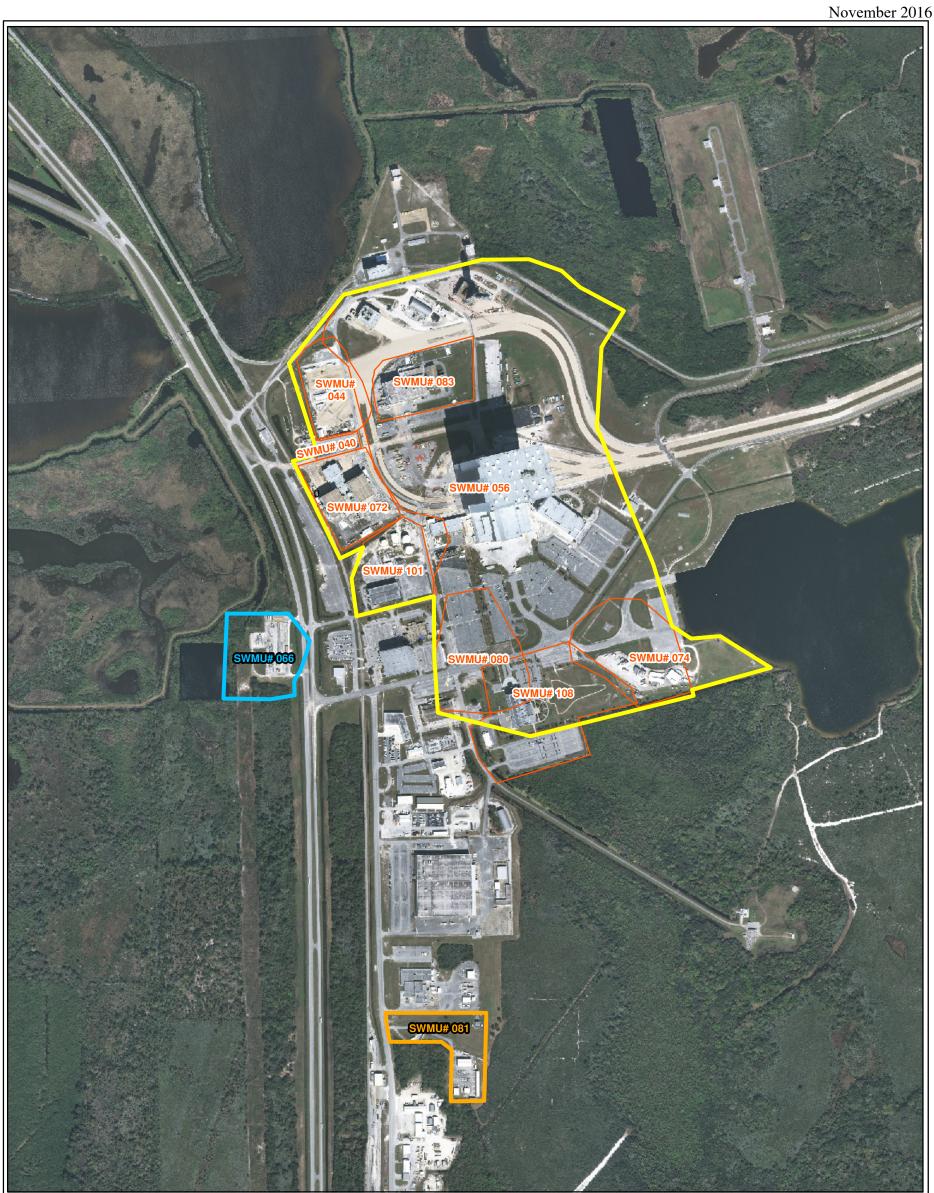


Figure 1-1 Solid Waste Management Units included in Western VAB Area LTM



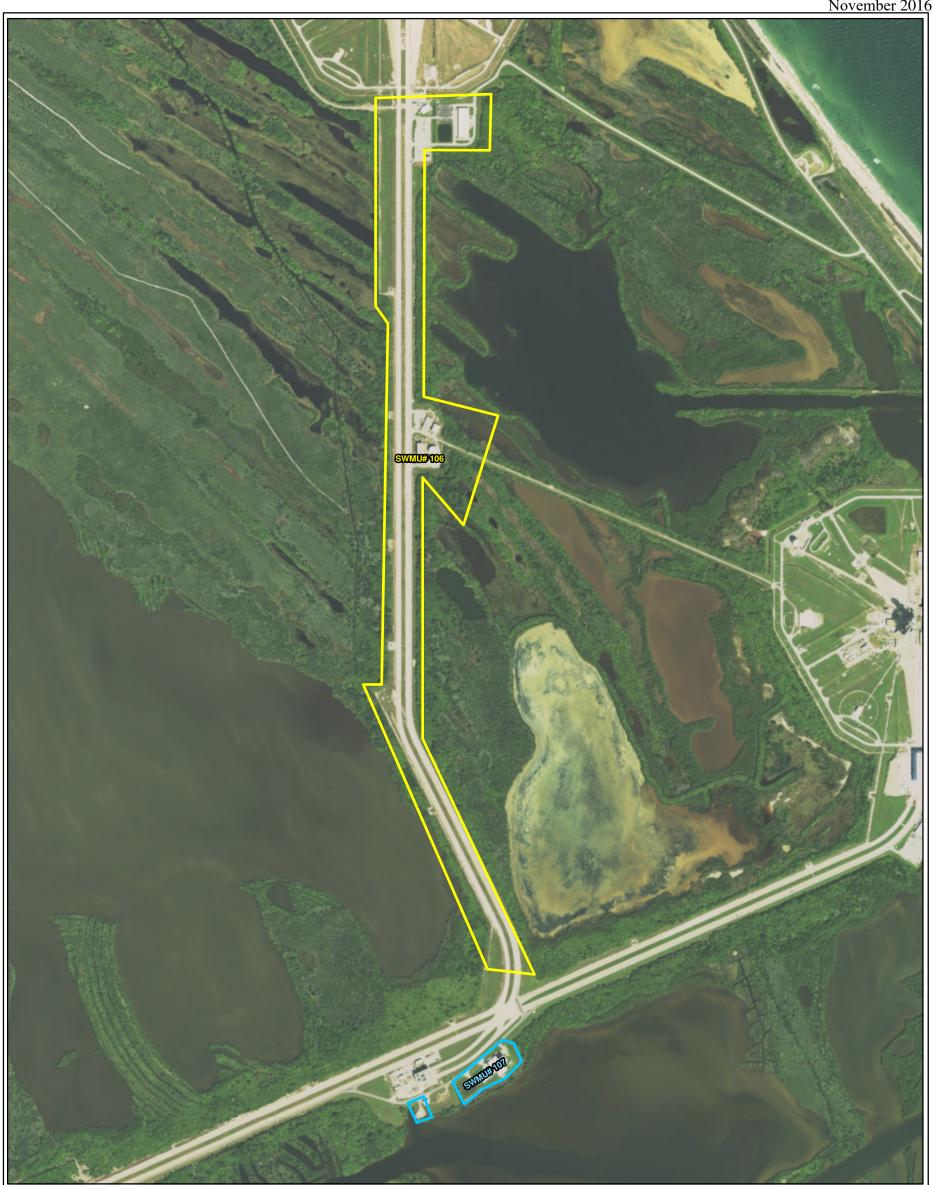
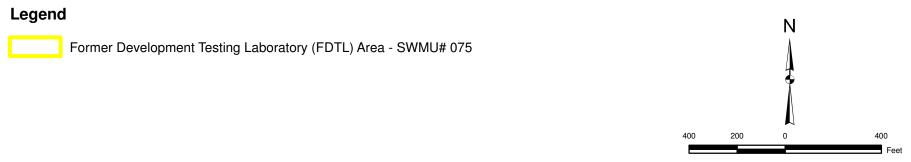


Figure 1-2 Solid Waste Management Units included in Eastern VAB Area LTM





Figure 1-3 Solid Waste Management Units off Schwartz Road included in VAB Area LTM



SECTION II

BIENNIAL GROUNDWATER SAMPLING ACTIVITIES

The biennial LTM monitoring well network is presented in Table 2-1. Geosyntec personnel deployed passive diffusion bags (PDBs) C5ES Area, FS6 Area, FDTL Area, and VAB Area monitoring wells on 3, 4, and 6 May 2016. PDBs were suspended across the midsection of the screen and allowed to equilibrate prior to sample retrieval. The LTM event activities were performed on 23 through 27 May 2016. Water levels were recorded from a total of 113 monitoring wells. Groundwater samples were collected from 48 monitoring wells. Water levels were not recorded in 26 monitoring wells, because they were inaccessible, could not be located or were abandoned. Groundwater quality parameters were not collected in monitoring wells sampled using PDBs. Site layouts and monitoring well locations for the FS6 Area, FDTL Area, C5ES Area, SFOC Area, VAB Area, and are presented on Figures 2-1 through 2-5, respectively.

Monitoring well purging (for the locations sampled using traditional purging techniques) and sampling activities were conducted in accordance with the most recent version of the Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOPs) [FDEP 2014] and the KSC Sampling and Analysis Plan (SAP) [NASA 2011]. Groundwater samples collected for chemical analysis were submitted to Test America in Pensacola, Florida for analysis under chain-of-custody protocols. The groundwater samples were analyzed for volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260B or total antimony by EPA Method 200.8 (Table 2-1). Groundwater sampling forms from the spring 2016 sampling event are presented in Appendix B.

Table 2-1. LTM Monitoring Well Network

Well ID	Area	Screened Interval	Water Levels	Parameters Analyzed in
		(ft BLS)		Spring 2016
FS6-MW0001		25 to 35	✓	VOCs
FS6-MW0002	FS6	20 to 30	✓	
FS6-MW0003		20 to 30	✓	VOCs
FDTL-IW0006S		5 to 15	✓	
FDTL-IW0015S		5 to 15	✓	VOCs
FDTL-IW0018I		5 to 15	✓	
FDTL-IW0003I		15 to 25	✓	
FDTL-IW0004I		15 to 25	✓	
FDTL-IW0005I		25 to 35	✓	
FDTL-IW0007I		10 to 20	✓	VOCs
FDTL-IW0008I		10 to 20	✓	VOCs
FDTL-IW0009I		10 to 20	✓	VOCs
FDTL-IW0010I	FDTL	10 to 20	✓	
FDTL-IW0011I		10 to 20	<i>√</i>	
		10 to 20	→	+
FDTL-IW0012I			√	
FDTL-IW0013I		10 to 20	√	VOCs
FDTL-IW0014I		10 to 20		VOCs
FDTL-IW0016I		10 to 20	✓	
FDTL-IW0017I		10 to 20	✓	VOCs
FDTL-IW0019I		10 to 20	✓	VOCs
FDTL-IW0020I		10 to 20	✓	
C5ES-MW0001S		5 to 15	✓	
C5ES-MW0001I		28 to 33	√	
C5ES-MW0002S		5 to 15	√	
C5ES-MW0003S		5 to 15	✓ ✓	
C5ES-MW0003I C5ES-MW0004S		28 to 33 5 to 15	→	
C5ES-MW00045		28 to 33	· ✓	
C5ES-MW0005S		5 to 15	✓	
C5ES-MW0007S		5 to 15		
C5ES-MW0008S		3 to 13		
C5ES-MW0009S		5 to 15		
C5ES-MW0010S	CEEC	10 to 15	✓ ✓	 VOC:
C5ES-MW0010I	C5ES	20 to 25	√	VOCs
C5ES-MW0011S C5ES-MW0012S		10 to 15 10 to 15	√	VOCs
C5ES-MW0012I		20 to 25	· ✓	VOCs
C5ES-MW0013S		9.5 to 14.5	✓	
C5ES-MW0013I		33 to 38	✓	
C5ES-MW0014I		33 to 38	✓	
C5ES-MW0015I		33 to 38		
C5ES-MW0016S		7 to 12	√	 VOC
C5ES-MW0017S		7 to 12	√	VOCs VOCs
C5ES-MW0018S C5ES-MW0019I		7 to 12 13 to 23	✓ ✓	VOCs
C5ES-PZ0001		5 to 15	√	
SFOC-IW0001S		2 to 12	√	Total Antimony
SFOC-IW0002S		2 to 12	✓	
SFOC-IW0003S	SFOC	2 to 12	✓	
SFOC-IW0004S	SPOC	2 to 12	✓	Total Antimony
SFOC-IW0005S		2 to 12	√	
SFOC-IW0006S		5 to 15	√	
MLPV-IW0001S	VAB	2 to 12	√	
MLPV-IW0001D		50 to 55	ν	

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Table 2-1. LTM Monitoring Well Network

Well ID					<u> </u>
MLPV-IW000901 28 to 33 ✓ VOCS MLPV-IW00011 35 to 40 ✓ VOCS MLPV-IW0012D 45 to 50 ✓ VOCS MLPV-IW0012D 35 to 40 ✓ — MLPV-IW00141 35 to 40 ✓ — MLPV-IW00171 35 to 40 ✓ — MLPV-IW0018D 50 to 55 ✓ VOCs MLPV-IW0018D 50 to 55 ✓ VOCs MLPV-IW002D 48 to 53 ✓ — MLPV-IW002TD 45 to 50 ✓ — MLPV-IW0002TD 45 to 50 ✓ VOCs	Well ID	Area	Screened Interval (ft BLS)	Water Levels	Parameters Analyzed in Spring 2016
MLPV-IW0009D	MLPV-IW0002I		28 to 33		
MLPV-IW0011 35 to 40	MLPV-IW0006IR		28 to 33	✓	VOCs
MLPV-IW00111	MLPV-IW0009D		45 to 50	✓	VOCs
MLPV-IW0012D	MLPV-IW0009I		28 to 33	✓	VOCs
MI_PV-IW00121	MLPV-IW0011I		35 to 40	✓	
MLPV-IW00141	MLPV-IW0012D		45 to 50	✓	VOCs
MI_PV_IW00171	MLPV-IW0012I		35 to 40	✓	VOCs
MLPV-IW0022D	MLPV-IW0014I		35 to 40	✓	
MILPV-IW0022D	MLPV-IW0017I		35 to 40	✓	
MI_PV-IW0027D	MLPV-IW0018D		50 to 55	✓	VOCs
MI_PV-IW00271	MLPV-IW0022D		48 to 53	✓	
MLPV-IW0028D	MLPV-IW0027D		45 to 50	✓	
MI_PV-IW00281	MLPV-IW0027I		28 to 33	✓	
MLPV-IW0029D	MLPV-IW0028D		45 to 50	✓	
MLPV-IW0046	MLPV-IW0028I		28 to 33	✓	VOCs
MLPV-IW0048	MLPV-IW0029D		42 to 47	✓	VOCs
MLPV-IW0048 40 to 50 ✓ VOCs MLPV-IW0049 38 to 48 ✓ VOCs MLPV-IW0050 40 to 50 ✓ VOCs MLPV-IW0051 45 to 55 ✓ VOCs MLPV-IW0052 40 to 50 ✓ VOCs MLPV-IW0053 40 to 50 ✓ VOCs MLPV-IW0054 40 to 50 ✓ VOCs MLPV-IW0055 40 to 50 ✓ VOCs MLPV-SAMW0001 43 to 48 ✓ VOCs MLPV-SAMW0003 VAB 43 to 48 ✓ VOCs MLPV-IW00061 2 to 12 Abandoned VOCs OP12-IW0001S 2 to 12 Abandoned VOCs OP12-IW0002I 2 to 12 Abandoned OP12-IW0002I 2 to 12 Abandoned OP12-IW0003S 2 to 12 Abandoned OP12-IW0004I 20 to 30 Abandoned OP12-IW0004S 2 to 12 Abandoned OP12-IW0004I 20 to 30 Abandoned OP12-IW0005S 2 to 12 Abandoned OP12-IW0007I 20 to 30 Abandoned OP12-IW0000F 2 to 1	MLPV-IW0046		35 to 45	✓	VOCs
MLPV-IW0050	MLPV-IW0047		35 to 45	✓	VOCs
MLPV-IW0050	MLPV-IW0048			✓	
MLPV-IW0051	MLPV-IW0049		38 to 48	✓	VOCs
MLPV-IW0052	MLPV-IW0050		40 to 50	✓	VOCs
MLPV-IW0053	MLPV-IW0051		45 to 55	✓	VOCs
MLPV-IW0054	MLPV-IW0052		40 to 50	✓	VOCs
MLPV-IW0055 MLPV-IW0056 MLPV-SAMW0001 MLPV-SAMW0001 MLPV-SAMW0003 VAB 43 to 48 V VOCs	MLPV-IW0053		35 to 45	✓	VOCs
MLPV-IW0055 MLPV-SAMW0001 MLPV-SAMW0001 MLPV-SAMW0003 VAB 43 to 48 ✓ VOCs MLPV-SAMW0003 VAB 43 to 48 ✓ VOCs MLPV-SAMW0003 VAB 43 to 48 ✓ VOCs MLPV-SAMW0001 VAB 43 to 48 ✓ VOCs VAS	MLPV-IW0054		40 to 50	✓	VOCs
MLPV-SAMW0001 MLPV-SAMW0003 VAB 43 to 48 VOCs				✓	
MLPV-SAMW0003 OP12-IW00015 2 to 12 Abandoned	MLPV-IW0056		30 to 40	✓	VOCs
OP12-IW0001S 2 to 12 Abandoned OP12-IW0002S 2 to 12 Abandoned OP12-IW0002S 2 to 12 Abandoned OP12-IW0002S 2 to 12 Abandoned OP12-IW0003S 20 to 30 Abandoned OP12-IW0003S 20 to 30 Abandoned OP12-IW0004S 2 to 12 Abandoned OP12-IW0004S 2 to 12 Abandoned OP12-IW0004S 2 to 12 Abandoned OP12-IW0005S 2 to 12 Abandoned OP12-IW0007S 2 to 15 Abandoned OP12-IW	MLPV-SAMW0001		43 to 48	✓	VOCs
OP12-IW00011 2 to 12 Abandoned OP12-IW0002S 2 to 12 Abandoned OP12-IW0002I 2 to 12 Abandoned OP12-IW0003S 2 to 12 Abandoned OP12-IW0003I 20 to 30 Abandoned OP12-IW0004S 2 to 12 Abandoned OP12-IW0004I 20 to 30 Abandoned OP12-IW0005S 2 to 12 Abandoned OP12-IW0005I 20 to 30 Abandoned OP12-IW0007S 2 to 12 Abandoned OP12-IW0007S 2 to 12 Abandoned OPF3-IW0001D 20 to 30 Abandoned OPF3-IW00007I 20 to 30 Abandoned OPF3-IW00008 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ ✓ PCCA-MW0007 5 to 15 ✓ ✓ PCCA-MW0001 5 to 15 ✓ ✓ PCCA-MW0010 5 to 15 ✓ ✓ PCCA-MW0012 5 to 15 ✓ ✓ PCCA-MW0015 5 to 15	MLPV-SAMW0003	VAB	43 to 48	✓	VOCs
OP12-IW0002S 2 to 12 Abandoned OP12-IW0003S 20 to 30 Abandoned OP12-IW0003I 20 to 30 Abandoned OP12-IW0004S 20 to 30 Abandoned OP12-IW0004I 20 to 30 Abandoned OP12-IW0005S 2 to 12 Abandoned OP12-IW0005I 20 to 30 Abandoned OP12-IW0007S 20 to 30 Abandoned OP12-IW0007I 20 to 30 Abandoned OP73-IW0001D 20 to 30 Abandoned OP73-IW0006S 2 to 12 Abandoned OP73-IW0006S 20 to 30 Abandoned OP73-IW0000F 20 to 30 Abandoned OP73-IW0000F 20 to 30 Abandoned OP73-IW0000F 20 to 30 Abandoned OP73-IW0000B 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ VOCs PCCA-MW0007 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓			2 to 12	Aba	andoned
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OP12-IW00031 20 to 30 Abandoned OP12-IW0004S 2 to 12 Abandoned OP12-IW0005S 2 to 12 Abandoned OP12-IW0005I 20 to 30 Abandoned OP12-IW0006S 2 to 12 Abandoned OP12-IW0007S 2 to 12 Abandoned OP12-IW0007I 20 to 30 Abandoned OPF3-IW0001D 42 to 47 Abandoned OPF3-IW0006S 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 5 to 15 ✓ PCCA-MW0016 5 to 25 ✓ PCCA-MW0017 5 to 25 ✓	OP12-IW0003S		2 to 12	Aba	andoned
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OP12-IW00051 20 to 30 Abandoned OP12-IW0007S 2 to 12 Abandoned OP12-IW0007I 20 to 30 Abandoned OPF3-IW0001D 42 to 47 Abandoned OPF3-IW0006S 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ PCCA-MW0007 5 to 15 ✓ PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓			20 to 30	Aba	andoned
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OP12-IW0007S 2 to 12 Abandoned OP12-IW0007I 20 to 30 Abandoned OPF3-IW0001D 42 to 47 Abandoned OPF3-IW0006S 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ PCCA-MW0007 5 to 15 ✓ PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓	OP12-IW0005I		20 to 30	Aba	andoned
OP12-IW0007S 2 to 12 Abandoned OP12-IW0007I 20 to 30 Abandoned OPF3-IW0001D 42 to 47 Abandoned OPF3-IW0006S 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ PCCA-MW0007 5 to 15 ✓ PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓	OP12-IW0006S		2 to 12	Aba	andoned
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OPF3-IW0006S 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ VOCs PCCA-MW0007 5 to 15 ✓ PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	OP12-IW0007I		20 to 30	Aba	andoned
OPF3-IW0006S 10 to 20 ✓ PCCA-MW0004 5 to 15 ✓ VOCs PCCA-MW0007 5 to 15 ✓ PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	OPF3-IW0001D			Aba	andoned
PCCA-MW0004 5 to 15 ✓ VOCs PCCA-MW0007 5 to 15 ✓ PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓				✓	
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PCCA-MW0008 5 to 15 ✓ PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	PCCA-MW0007			✓	
PCCA-MW0009 5 to 15 ✓ PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	PCCA-MW0008			✓	
PCCA-MW0010 5 to 15 ✓ PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	PCCA-MW0009			✓	
PCCA-MW0011 5 to 15 ✓ PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	PCCA-MW0010			✓	
PCCA-MW0012 5 to 15 ✓ PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	PCCA-MW0011			✓	
PCCA-MW0013 5 to 15 ✓ PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	PCCA-MW0012			✓	
PCCA-MW0014 5 to 15 ✓ PCCA-MW0015 15 to 25 ✓ PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs	PCCA-MW0013			✓	
PCCA-MW0015 15 to 25 ✓ PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs				✓	
PCCA-MW0016 15 to 25 ✓ PCCA-MW0017 15 to 25 ✓ VOCs				✓	
PCCA-MW0017 15 to 25 ✓ VOCs				✓	
				✓	VOCs
			15 to 25	✓	

Table 2-1. LTM Monitoring Well Network

Well ID	Area	Screened Interval (ft BLS)	Water Levels	Parameters Analyzed in Spring 2016
PCCA-MW0019		15 to 25	✓	
PCCA-MW0020		25 to 35	✓	
PRES-IW0001SR		6 to 16	✓	
PRES-IW0002D		42 to 47		
PRES-IW0006S		3 to 13		
PRES-IW0007S		1 to 11		
PRES-IW0007I		32 to 37	✓	VOCs
PRES-IW0007D		42 to 47	✓	
PRES-IW0008I		38 to 42		
PRES-IW0009		40 to 50	✓	VOCs
PRES-IW0010		40 to 50	✓	VOCs
SATV-IW0003D		40 to 45	✓	
SATV-IW0009I		22 to 27	✓	VOCs
SATV-IW0010		35 to 45	✓	VOCs
TPF-MW0001	VAB	23 to 28	✓	
VABU-IW0004S		3 to 13	✓	
VABU-IW0006D		42 to 47	✓	
WCPS-IW0001SR		2.5 to 12.5	✓	VOCs
WCPS-IW0002SR		2.5 to 12.5		
WCPS-IW0005S		2 to 12	✓	
WCPS-IW0006S		3 to 13	✓	
WCPS-IW0009S		2.5 to 12.5	✓	
WCPS-IW0010S		2.5 to 12.5		
WCPS-IW0012S		2 to 12		
WCPS-IW0013S		2.5 to 12.5	✓	
WCPS-IW0014S		4 to 14	✓	
WCPS-IW0015S		3 to 13	✓	
WCPS-IW0016		15 to 25	✓	VOCs

- 1. BLS = Below Land Surface.
- 2. ft = feet.
- 3. "--" indicates that data was not collected. The water levels not collected were due to limited accessibility or because the wells could not be located or were abandoned.
- 4. VOCs indicates volatile organic compounds collected using passive diffusion bags (PDBs).
- 5. Grey shading indicates groundwater sample collected using low flow purging methods.
- 6. Abandoned indicates the associated wells were abandoned on November 10, 2015 by Jacobs-CORE under Contract No. NNK12CA14B, Task Order No. 06.

November 2016

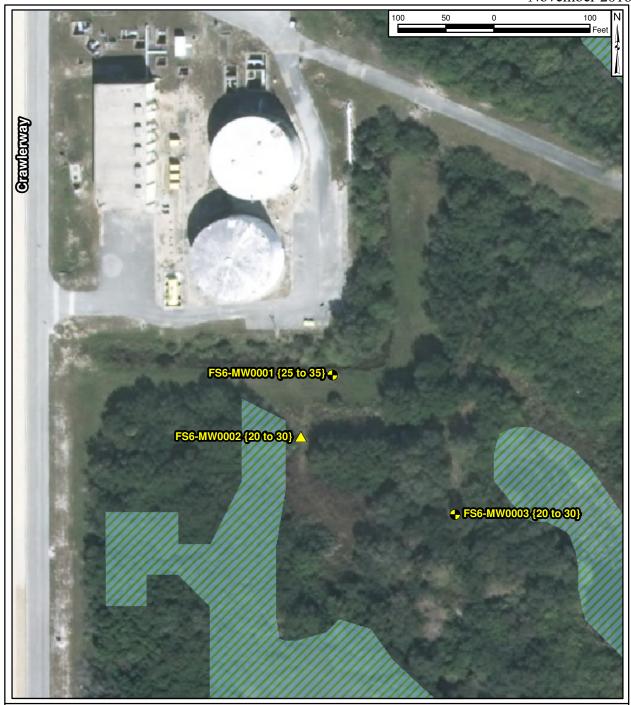


Figure 2-1 FS6 Area Site Layout

Legend

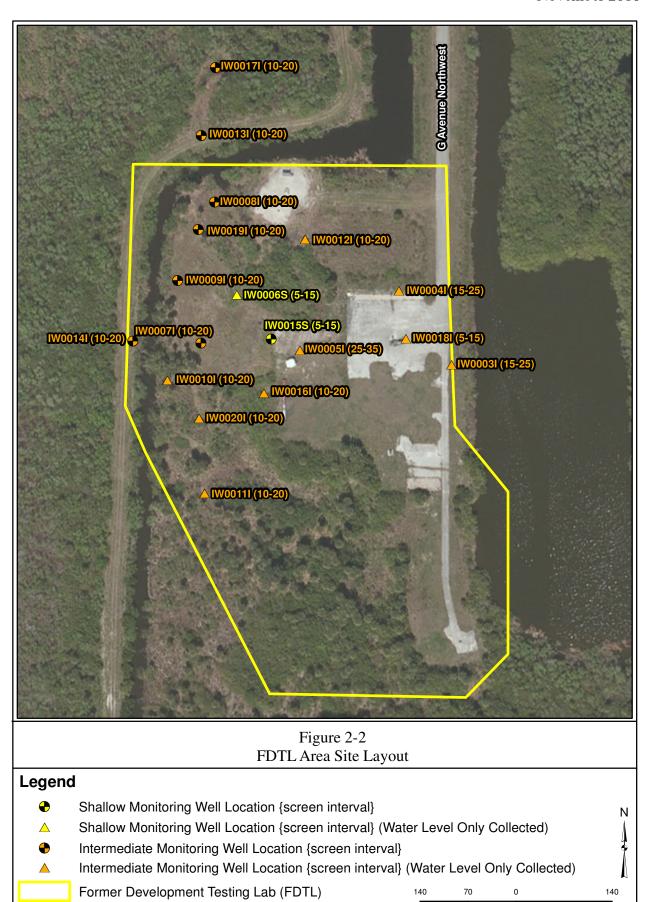
Shallow Monitoring Well Location (screen interval)

Shallow Monitoring Well Location (screen interval) (Water Level Only Collected)

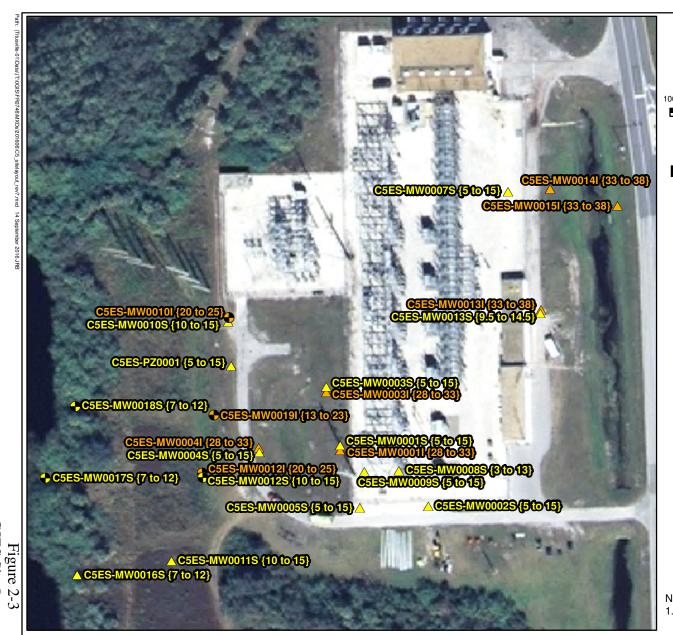
Wetlands

Notes:

1. Screen intervals are presented in feet below land surface.



November 2016



Legend

Shallow Monitoring Well Location {screen interval}

Ν

100

- Shallow Monitoring Well Location (screen interval) (Water Level Only Collected)
- Intermediate Monitoring Well Location (screen interval)
- ▲ Intermediate Monitoring Well Location {screen interval} (Water Level Only Collected)

Note:

1. Screen interval is presented in feet, below land surface (ft, BLS).



0 60 0 120 Feet

Legend

- Shallow Monitoring Well Location (screen interval)
- Shallow Monitoring Well Location (screen interval) (Water Level Only Collected)
- ·×-× Fence

Note:

Screen interval is presented in feet, below land surface (ft, BLS).

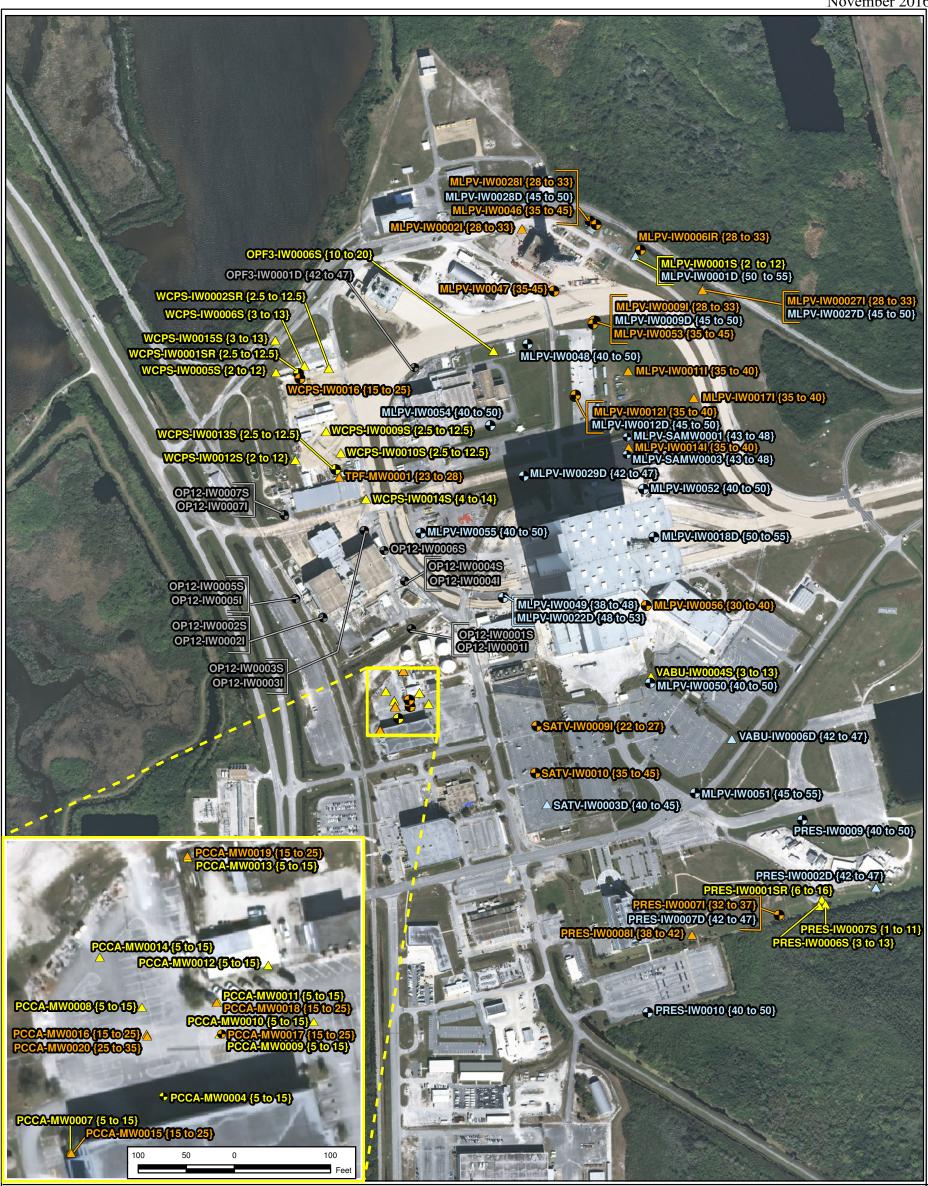
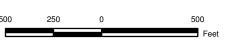


Figure 2-5 VAB Area Site Layout

Legend

- Shallow Monitoring Well Location {screen interval}
- Intermediate Monitoring Well Location {screen interval}
- Deep Monitoring Well Location **•** {screen interval}
- Abandoned Monitoring Well Location
- Shallow Monitoring Well Location (screen interval) (Water Level Only Collected)
 - Intermediate Monitoring Well Location {screen interval} (Water Level Only Collected)
- Deep Monitoring Well Location (screen interval) (Water Level Only Collected)



Notes:

- 1. Screen interval is presented in feet, below
- land surface (ft, BLS).

 2. OP12 wells (IW01S, IW01I, IW-02S, IW-02I, IW-03S, IW-03I, IW-04S, IW-04I, IW-05S, IW-05I, IW-06S, IW-07S, and IW-07I) and OPF3-IW01D were abandoned on November 10, 2015 by Jacobs-CORE as documented in the letter report entitled "Well Abandonments at Various Sites" dated 12 July 2016.

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SECTION III

FIRE STATION 6 AREA (SWMU 106) RESULTS

3.1 WATER LEVELS AND GROUNDWATER FLOW DIRECTION

Groundwater levels in the FS6 Area were recorded on 25 May 2016 and are summarized in Table 3-1. In addition, select historical data of depth to groundwater and groundwater elevation data is summarized in this table. In general, the inferred direction of groundwater flow is to the south (Figure 3-1). This is generally consistent with prior observations of groundwater flow in the FS6 Area.

Hydrographs are presented on Figure 3-2. Generally, the hydrographs are similar in that they appear to show seasonal patterns with higher groundwater elevations in the fall than in the spring until May 2009. Groundwater elevations since May 2009 do not appear to exhibit a pattern, nor do they appear to be seasonally influenced. On average, groundwater levels decreased by approximately 0.6 feet between spring 2016 and fall 2014.

3.2 LABORATORY ANALYTICAL RESULTS

A summary of the historical and current analytical results for the wells sampled as part of this LTM plan are presented in Table 3-2. This table includes historical and current results associated with the contaminants of concern for this facility, namely VOCs. A summary of available vinyl chloride (VC) results for the past five years is provided on Figure 3-3. Laboratory analytical reports are presented in Appendix C.

The 2016 analytical results revealed no exceedances of the FDEP Groundwater Cleanup Target Levels (GCTL) for VC (of 1 μ g/L) in the two monitoring wells sampled during this event, including FS6-MW0001 and FS6-MW0003. VC concentrations were observed below laboratory detection limits (Figure 3-3). These results are less than previous three years' results.

3.3 TREND ANALYSIS

Review of historical and current data for this facility indicates that VC is the constituent of concern. A time trend plot of VC concentrations detected in wells FS6-IW0001 and FS6-IW0003 is provided as Figure 3-2. Overall, there is a decreasing trend in VC concentrations in FS6-IW0001 and FS6-IW0003.

Table 3-1. FS6 Groundwater Elevations

	G 1		6/28/10		11/20/12		5/13/13		11/25/13		11/19/14		5/25/16	
Well ID	Screened Interval (ft BLS)	TOC Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)										
FS6-MW0001	25 to 35	1.12	1.10	0.02	0.90	0.22	0.25	0.87	1.06	0.06	0.35	0.77	0.76	0.36
FS6-MW0002	20 to 30	6.80	N.	M	6.53	0.27	5.79	1.01	6.75	0.05	5.90	0.90	6.64	0.16
FS6-MW0003	20 to 30	5.88	N.	M	5.97	-0.09	5.25	0.63	5.98	-0.10	5.34	0.54	5.94	-0.06

- 1. BLS = Below Land Surface.
- 2. BTOC = Below Top of Casing.
- 3. ft = feet.
- 4. TOC = Top of Casing.
- 5. NM = Not Measured.
- 6. NAVD88 = North American Vertical Datum of 1988.

Table 3-2. FS6 Summary of Historical Groundwater Data

		Well ID:			F	FS6-MW000	1			
Scree	ned Interva	ıl (ft BLS):		25 to 35						
	Saı	mple Date:	Jul-09	Jun-10	Nov-12	May-13	Nov-13	Nov-14	May-16	
	g Criteria									
	NADC									
VOCs (µg/L)										
Vinyl Chloride	1	100	3.1	1.6	2.5	2	2.8	2.2	0.50 U	

		Well ID:	FS6-MW0003							
Screen	ned Interva	ıl (ft BLS):		20 to 30						
	Sa	mple Date:	Nov-12	May-13	Nov-13	Nov-14	May-16			
	Screenin	g Criteria								
	GCTL	NADC								
VOCs (µg/L)										
Vinyl Chloride	1	100	0.44 U	3.7	5.2	4.7	0.50 U			

- 1. ft BLS = feet Below Land Surface.
- 2. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 3. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
- 4. μ g/L = micrograms per liter.
- 5. U = Undetected.
- 6. Yellow shaded, bold text indicates exceedance of GCTL.

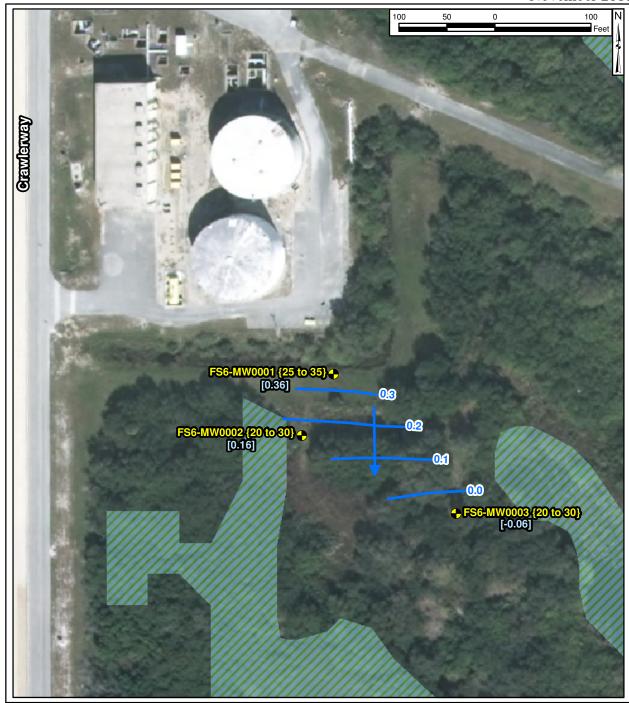


Figure 3-1 FS6 Shallow Zone Potentiometric Surface Map – May 2016

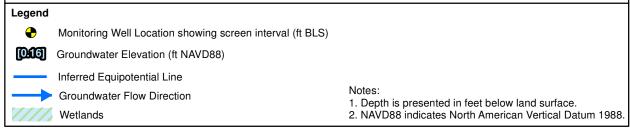
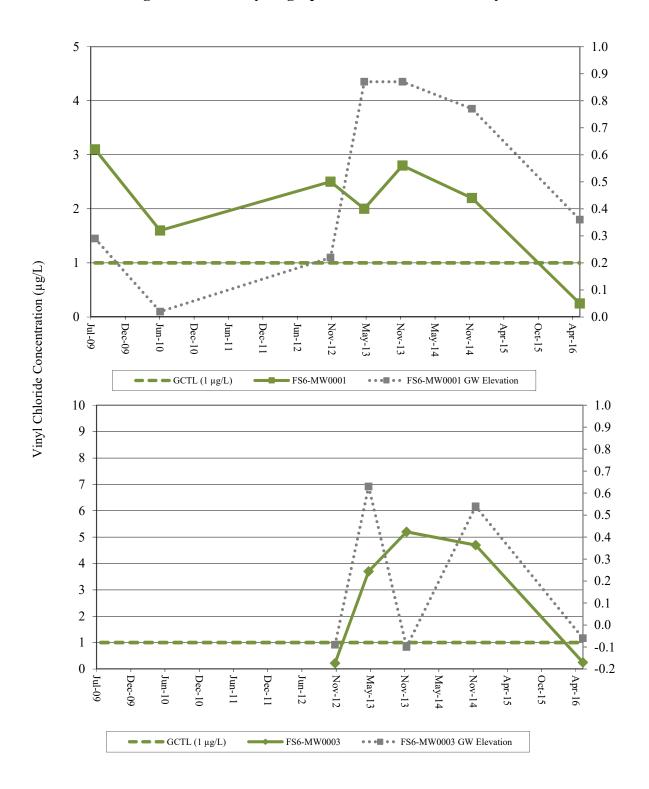


Figure 3-2. FS6 Hydrographs and Trend Plots of Vinyl Chloride



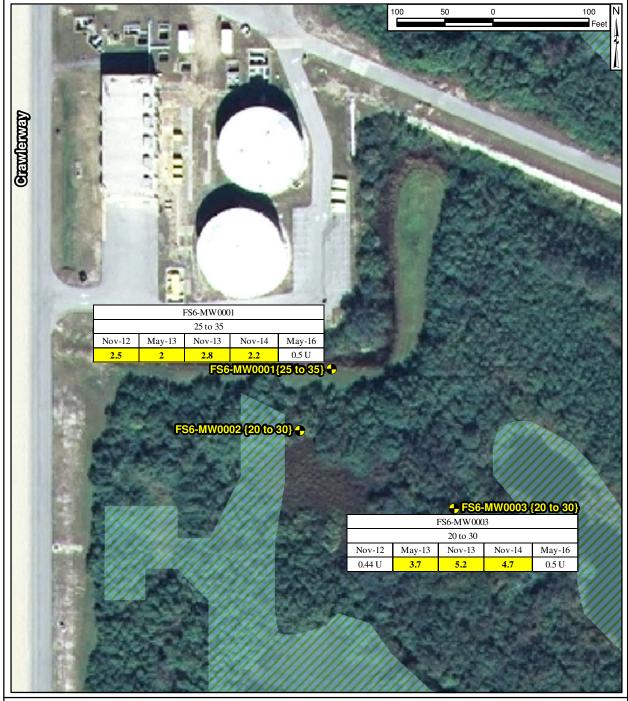


Figure 3-3 FS6 Summary of Vinyl Chloride Results

Legend

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Monitoring Well Location showing screen interval (ft BLS)



Wetlands

Screenin	g Criteri	ia
Parameter	GCTL	NADC
Vinyl Chloride	1	100

- 1. Screen intervals are presented in feet below land surface.
- 2. Results are presented in micrograms per liter.
- 3. U indicates not detected above method detection limit.
- Yellow shaded, bold text indicates an exceedance of the Florida Department of Environmental Protection (FDEP) Groundwater Cleanup Target Level (GCTL).
- 5. NADC indicates FDEP Natural Attenuation Default Concentration.
- 6. Previous data reported in the FS6 Long-Term Monitoring Work Plan, June 2014.

SECTION IV

FORMER DEVELOPMENT AND TESTING LABORATORY (SWMU 75) RESULTS

4.1 WATER LEVELS AND GROUNDWATER FLOW DIRECTION

Groundwater levels were recorded on 25 May 2016 and are summarized in Table 4-1. Since FDTL was recently added to the sampling event, there is no historical data collected by Geosyntec. In general, shallow groundwater flow is to the east (Figure 4-1) and intermediate groundwater flow is to the west (Figure 4-2). This is generally consistent with prior observations of groundwater flow in the FDTL Area.

Hydrographs for the shallow and intermediate zones are presented on Figures 4-3 and 4-4, respectively. In general, historic groundwater elevation data appears to vary seasonally with elevations being higher in the fall than the spring. The shallow groundwater zone appears to be the most sensitive to seasonal influences, which is expected because it has more direct contact with atmospheric conditions and it is more readily affected by stormwater runoff and evapotranspiration than the intermediate zone. Aside from seasonal fluctuations, the overall trend indicates that groundwater elevations have generally been consistent in the intermediate zone. Groundwater elevation data collected in the intermediate and shallow zone during the 2016 sampling event are consistent with historic observations in both zones.

4.2 LABORATORY ANALYTICAL RESULTS

A summary of the historical and current analytical results for the wells sampled as part of this LTM plan are presented in Table 4-2. This table includes historical and current results associated with the contaminants of concern for this facility, namely VOCs. A summary of available TCE and VC results are provided on Figure 4-5. Laboratory analytical reports are presented in Appendix C.

The 2016 analytical results revealed exceedances of the FDEP GCTL for TCE (of 3 μ g/L) in two monitoring wells sampled during this event, including FDTL-IW0009I and FDTL-IW0017I (from 4.2 to 5 μ g/L). The results also revealed exceedances of the FDEP GCTL for VC (of 1 μ g/L) in four monitoring wells sampled during this event, including FDTL-IW0008I, FDTL-IW0009I, FDTL-IW0015S, and FDTL-IW0019I (from 1.5 to 62 μ g/L). The results also revealed cDCE was detected below GCTL (of 70 μ g/L) in four wells sampled during this event, including FDTL-0007I, FDTL-0008I, FDTL-0009I, FDTL-0013I (from 8 to 23 μ g/L).

4.3 TREND ANALYSIS

A statistical analysis of the LTM results for the FDTL Area wells was conducted using the Monitoring and Remediation Optimization System (MAROS) software package (output is included in Appendix E). The output indicated that the TCE concentration trend for the wells evaluated was as follows:

- FDTL-IW0007I, FDTL-IW0008I, FDTL-IW0013I, and FDTL-IW0019I showed decreasing trends;
- FDTL-IW0009I showed a probable decreasing trend; and
- FDTL-IW0015S, FDTL-IW0014I, and FDTL-IW0017I showed no trends.

The output indicated that the VC concentration trend for the wells evaluated was as follows: FDTL-IW0015S showed a decreasing trend;

- FDTL-IW0019I showed a probable increasing trend;
- FDTL-IW0013I, FDTL-IW0014I, FDTL-IW0017I showed stable trends; and
- FDTL-IW0007I, FDTL-IW0008I, FDTL-IW0009I, and FDTL-IW0019I showed no trends.

Table 4-1. FDTL Groundwater Elevations

	Screened	TOC	5/22/	2014	05	/25/16					
Well ID	Interval (ft BLS)	Elevation (ft AMSL)	Depth to Water (ft BTOC)	Water Elevation (ft AMSL)	Depth to Water (ft BTOC)	Water Elevation (ft AMSL)					
Shallow Wells											
FDTL-IW0006S	5 to 15	3.86	N	M	5.48	-1.62					
FDTL-IW0015S	5 to 15	5.21	6.92	-1.71	6.82	-1.61					
FDTL-IW0018I	5 to 15	4.44	N	M	6.17	-1.73					
Intermediate Wells											
FDTL-IW0003I	15 to 25	4.5	N	M	5.91	-1.41					
FDTL-IW0004I	15 to 25	4.72	6.29	-1.57	6.32	-1.60					
FDTL-IW0005I	25 to 35	4.65	N	M	6.34	-1.69					
FDTL-IW0007I	10 to 20	2.15	3.82	-1.67	3.80	-1.65					
FDTL-IW0008I	10 to 20	2.85	N	M	4.39	-1.54					
FDTL-IW0009I	10 to 20	2.11	3.81	-1.7	3.80	-1.69					
FDTL-IW0010I	10 to 20	2.67	4.29	-1.62	4.30	-1.63					
FDTL-IW0011I	10 to 20	4.13	N	M	5.84	-1.71					
FDTL-IW0012I	10 to 20	2.34	N	M	3.96	-1.62					
FDTL-IW0013I	10 to 20	4.97	-1.04	6.01	6.47	-1.50					
FDTL-IW0014I	10 to 20	4.17	-2.22	6.39	6.90	-2.73					
FDTL-IW0016I	10 to 20	3.92	N	M	5.50	-1.58					
FDTL-IW0017I	10 to 20	1.74	3.45	3.45 -1.71 3.40		-1.66					
FDTL-IW0019I	10 to 20	10 to 20 3.26		-1.56	5.05	-1.79					
FDTL-IW0020I			N	M	4.25	-1.82					

- 1. BLS = Below Land Surface.
- 2. BTOC = Below Top of Casing.
- 3. ft = feet.
- 4. AMSL = Above Mean Sea Level.
- 5. TOC = Top of Casing.
- 6. Historical data (pre-2016) was obtained from the Former Development and Testing Laboratory 2014 Annual Groundwater Monitoring Report dated February 2015.
- 7. Bolded value not used in contouring the potentiometric surface.

November 2016

Table 4-2. FDTL Summary of Historical Groundwater Data

		Well ID:			F	DTL-IW000	7I						
Screen	ned Interval	(ft BLS):		10 to 20									
	San	nple Date:	Mar-11	Sep-11	Mar-12	Sep-12	Sep-13	May-14	May-16				
	Screenin	g Criteria											
	GCTL	NADC											
VOCs (μg/L)													
Acetone	6300	63000	10 U	12 U	12 U	12 U	12 U	4.8 I	10 U				
Trichloroethene	3	300	6.2	4.7	1.6	3.8	1.6	1.4 I	3				
cis-1,2-Dichloroethene	70	700	10.1	9.9	6.3	36	13	6.9	8				
trans-1,2-Dichloroethene	100	1000	0.35 U	1 U	1 U	1 U	1 U	0.73 U	0.50 U				
1,1-Dichloroethene	7	700	0.23 U	1 U	1 U	1 U	1 U	0.94 U	0.50 U				
Vinyl Chloride	1	100	0.22 U	1 U	1 U	1 U	20	17	0.50 U				

		Well ID:		F	DTL-IW001	3I					
Screen	ned Interval	(ft BLS):	10 to 20								
	San	nple Date:	Mar-12	Sep-12	Sep-13	May-14	May-16				
	Screenin	g Criteria									
	GCTL	NADC									
VOCs (µg/L)											
Acetone	6300	63000	12 U	12 U	12 U	1.8 U	10 U				
Trichloroethene	3	300	48	22	2.9	0.89 U	0.50 U				
cis-1,2-Dichloroethene	70	700	16	68	78	65	23				
trans-1,2-Dichloroethene	100	1000	1.1	6.3	11	9.3	4.4				
1,1-Dichloroethene	7	700	1 U	1.2 J	1.5 I	0.94 U	0.50 U				
Vinyl Chloride	1	100	1 U	1 U	1 U	0.71 U	0.50 U				

		Well ID:	FDTL-IW0014I								
Screen	ned Interval	l (ft BLS):	10 to 20								
	San	nple Date:	Mar-12	Sep-12	Sep-13	May-14	May-16				
	Screenin	g Criteria									
	GCTL	NADC									
VOCs (µg/L)											
Acetone	6300	63000	12 U	12 U	12 U	1.8 U	10 U				
Trichloroethene	3	300	1 U	1 U	1 U	0.89 U	0.50 U				
cis-1,2-Dichloroethene	70	700	1 U	1 J	1 U	0.53 U	0.50 U				
trans-1,2-Dichloroethene	100	1000	1 U	1 U	1 U	0.73 U	0.50 U				
1,1-Dichloroethene	7	700	1 U	1 U	1 U	0.94 U	0.50 U				
Vinyl Chloride	1	100	1 U	1 U	1 U	0.71 U	0.50 U				

		Well ID:			FDTL-I	W0008I							
Screen	ned Interval	(ft BLS):	10 to 20	10 to 20									
	San	nple Date:	May-07	Dec-08	Mar-10	Sep-10	Mar-11	May-16					
	Screenin	g Criteria											
	GCTL	NADC											
VOCs (µg/L)													
Acetone	6300	63000	25 U	10 U	10 U	10 U	10 U	14 I					
Trichloroethene	3	300	186	78.8	7.9	2.3	1.1	0.82 I					
cis-1,2-Dichloroethene	70	700	57.7	55	6.9	2.6	3.3	16					
trans-1,2-Dichloroethene	100	1000	8.8	3.8	0.34 U	0.34 U	0.35 U	1.3					
1,1-Dichloroethene	7	700	0.82 I	0.54 U	0.29 U	0.29 U	0.23 U	0.50 U					
Vinyl Chloride	1	100	2.6	0.98 I	0.51 I	0.28 U	0.22 U	15					

Notes:

6. Historical data (pre-2016) was obtained from the Former Development and Testing Laboratory 2014 Annual Groundwater Monitoring Report dated February 2015.

- 2. ft BLS = feet Below Land Surface.
- 3. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 4. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).

- 5. μ g/L = micrograms per liter.
- 6. U = Undetected.
- 7. I = analyte detected below quantitation limits.
- 8. J = estimated value below the reporting limit.
- 9. Yellow shaded, bold text indicates exceedance of GCTL.

Table 4-2. FDTL Summary of Historical Groundwater Data

		Well ID:						F	DTL-IW000	9I					
Screen	ned Interva	l (ft BLS):			10 to 20										
	San	nple Date:	Dec-08	Dec-09	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Sep-11	Mar-12	Sep-12	Sep-13	May-14	May-16
	Screenin	g Criteria													
	GCTL	NADC													
VOCs (µg/L)															
Acetone	6300	63000	500 U	10 U	10 U	10 U	10 U	10 U	10 U	12 U	12 U	12 U	12 U	4.0 I	13 I
Trichloroethene	3	300	2520	9.5	0.92 I	7.2	14.1	13.6	11	5.6	6.9	5.1	7.7	6.3	5
cis-1,2-Dichloroethene	70	700	753	2.7	0.32 U	2.8	4.3	5.3	4.5	5.9	15	16	14	13	15
trans-1,2-Dichloroethene	100	1000	23 U	0.45 U	0.34 U	0.34 U	0.34 U	0.35 U	0.35 U	1 U	1 U	1 U	1 U	0.73 U	0.50 U
1,1-Dichloroethene	7	700	12 U	0.24 U	0.22 U	0.22 U	0.22 U	0.25 U	0.25 U	1 U	1 U	1 U	1 U	0.62 U	0.50 U
Vinyl Chloride	1	100	15 U	0.30 U	0.28 U	0.28 U	0.28 U	0.22 U	0.22 U	1 U	1 U	1 U	1 U	0.71 U	1.5

		Well ID:		FDTL-IW0015S											
Screen	ned Interva	l (ft BLS):							5 to 15						
	Sar	nple Date:	Dec-08	Dec-09	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Sep-11	Mar-12	Sep-12	Sep-13	May-14	May-16
	Screenin	g Criteria													
	GCTL	NADC													
VOCs (µg/L)															
Acetone	6300	63000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	12 U	12 U	12 U	12 U	4.6 I	10 U
Trichloroethene	3	300	0.32 U	0.32 U	0.24 U	1	2.2	1.1	1.4	1 U	1	1 U	1 U	0.89 U	0.50 U
cis-1,2-Dichloroethene	70	700	1.5	1.2	0.96 I	0.75 I	1.2	0.81 I	0.92 I	0.62 J	9	1.4 J	1.6 I	1.3 I	0.50 U
trans-1,2-Dichloroethene	100	1000	0.45 U	0.45 U	0.34 U	0.34 U	0.34 U	0.35 U	0.35 U	1 U	1 U	1 U	1 U	0.73 U	0.50 U
1,1-Dichloroethene	7	700	0.54 U	0.54 U	0.29 U	0.29 U	0.29 U	0.23 U	0.23 U	1 U	1 U	1 U	1 U	0.94 U	0.58 I
Vinyl Chloride	1	100	79.2	45.8	23	13.5	14.6	10.8	10.8	2.9	2.6	14	17	12	15

		Well ID:				FDTL-I	W0017I						
Screen	ed Interval	(ft BLS):	10 to 20										
	San	nple Date:	Jan-09	Mar-10	Dec-10	Feb-11	Mar-12	Sep-13	May-14	May-16			
	Screenin	g Criteria											
	GCTL	NADC											
VOCs (µg/L)													
Acetone	6300	63000	12.8 I	10 U	10 U	10 U	12 U	12 U	5.1 I	10 U			
Trichloroethene	3	300	0.32 U	0.24 U	0.42 I	0.31 I	1 U	1 U	1.1 I	4.2			
cis-1,2-Dichloroethene	70	700	0.20 U	0.32 U	0.67 I	0.48 I	1 U	1 U	0.53 I	0.50 U			
trans-1,2-Dichloroethene	100	1000	0.45 U	0.34 U	0.35 U	0.35 U	1 U	1 U	0.73 U	0.50 U			
1,1-Dichloroethene	7	700	0.54 U	0.29 U	0.23 U	0.23 U	1 U	1 U	0.94 U	0.50 U			
Vinyl Chloride	1	100	0.30 U	0.28 U	0.22 U	0.22 U	1 U	1 U	0.71 U	0.50 U			

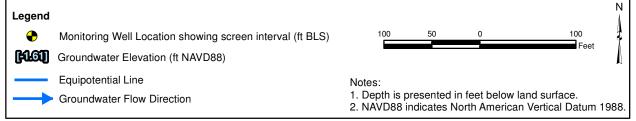
		Well ID:					FDTL-I	W0019I					
Screen	ned Interval	l (ft BLS):	10 to 20										
	San	nple Date:	Dec-08	Mar-10	Sep-10	Mar-11	Sep-11	Mar-12	Sep-12	Sep-13	May-14	May-16	
	Screening Criteri GCTL NAD												
	NADC												
VOCs (μg/L)													
Acetone	6300	63000	50 U	10 U	10 U	10 U	12 U	12 U	12 U	12 U	4.7 I	10 U	
Trichloroethene	3	300	251	3.7	1.5	0.86 I	0.62 J	1.2	2.2	1 U	0.89 U	0.50 U	
cis-1,2-Dichloroethene	70	700	159	4.6	1.7	1.3	0.89 J	0.93 J	4.5	0.69 I	0.53 U	0.50 U	
trans-1,2-Dichloroethene	100	1000	11.9	3.2	1.4	1.2	1 U	1.4	1.2 J	1.7 I	0.86 I	1.0	
1,1-Dichloroethene	7	700	1.2 U	0.22 U	0.22 U	0.25 U	1 U	1 U	1 U	1 U	0.62 U	0.50 U	
Vinyl Chloride	1	100	3.1 I	83	31.6	27	6.6	58	64	84	62	62	

- 1. Results presented prior to May 2016 were not collected by Geosyntec Representatives.
- 2. ft BLS = feet Below Land Surface.
- 3. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 4. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
- 5. μ g/L = micrograms per liter.

- 6. U = Undetected.
- 7. I = analyte detected below quantitation limits.
- 8. J = estimated value below the reporting limit.
- 9. Yellow shaded, bold text indicates exceedance of GCTL.



Figure 4-1
FDTL Shallow Zone Potentiometric Surface Map – May 2016



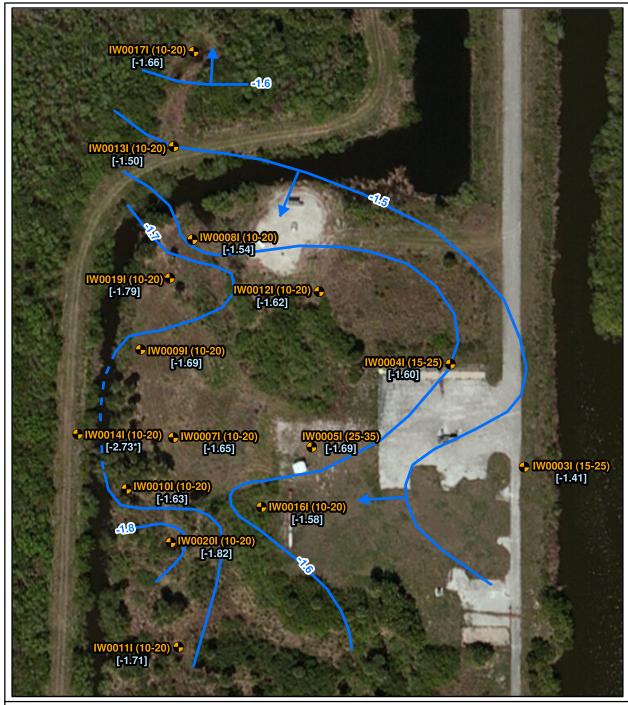
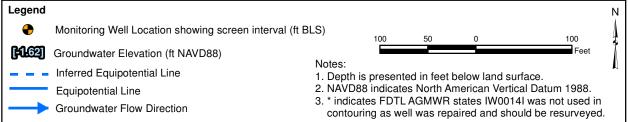
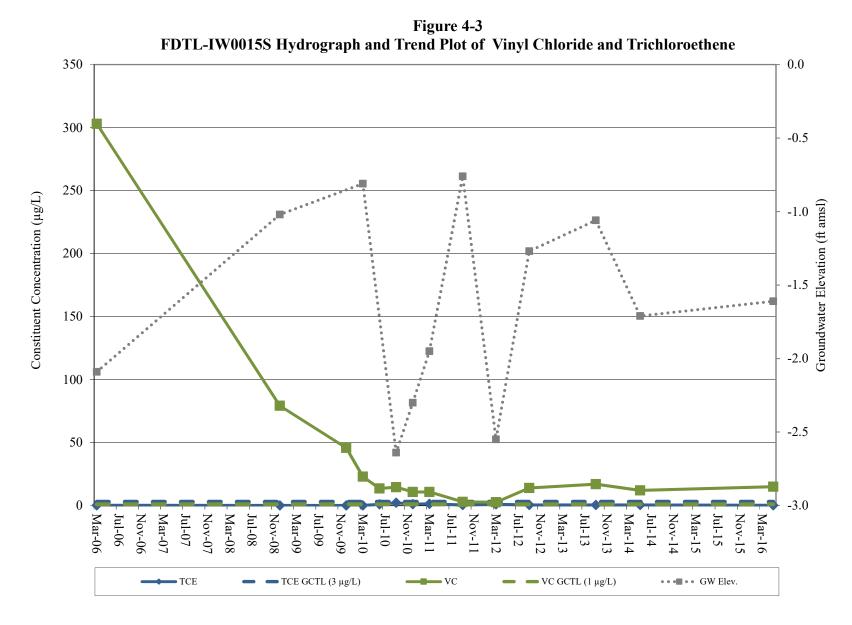


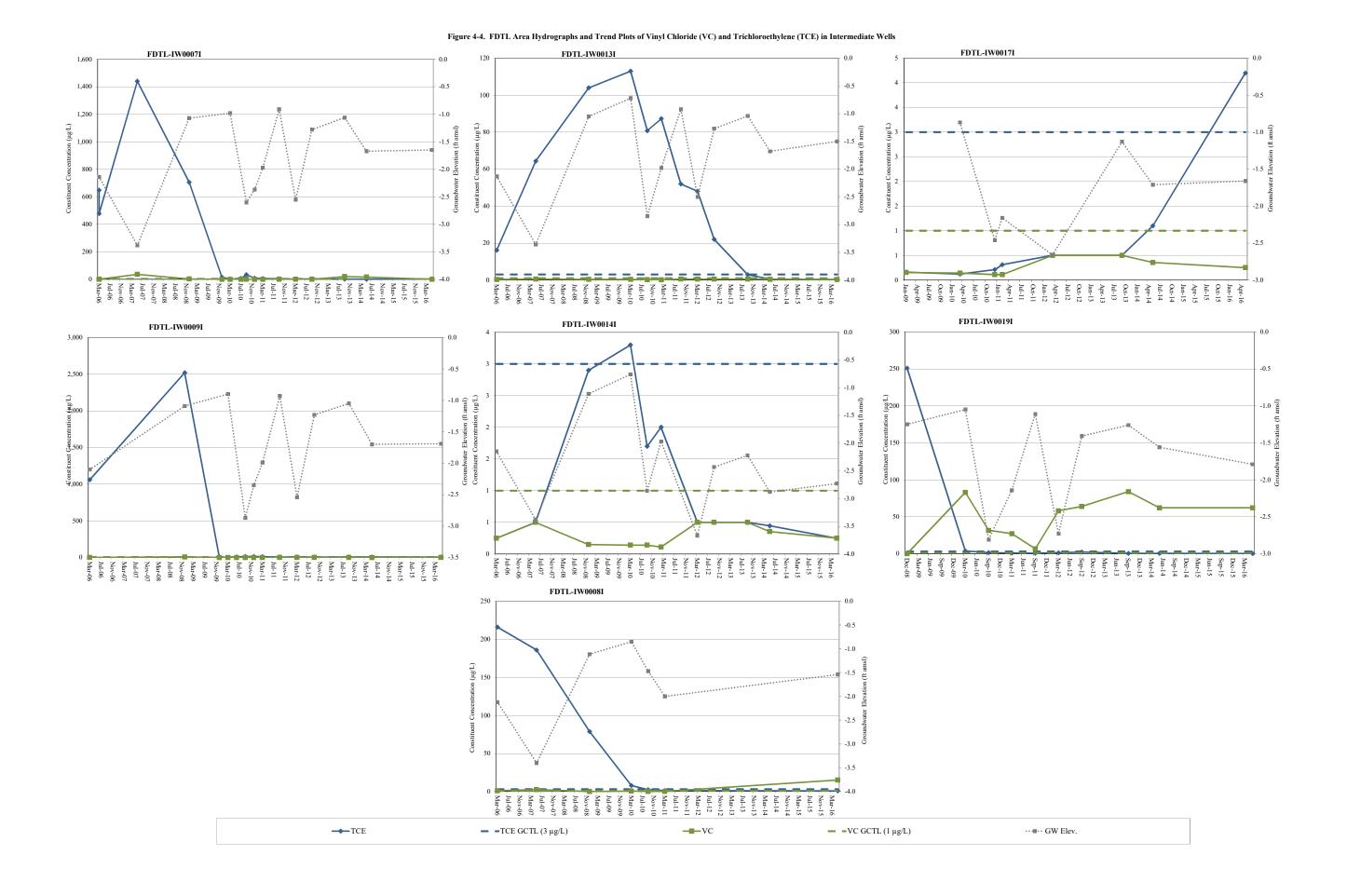
Figure 4-2
FDTL Intermediate Zone Potentiometric Surface Map – May 2016



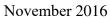
4-11/4-12



4-13/4-14



4-15/4-16



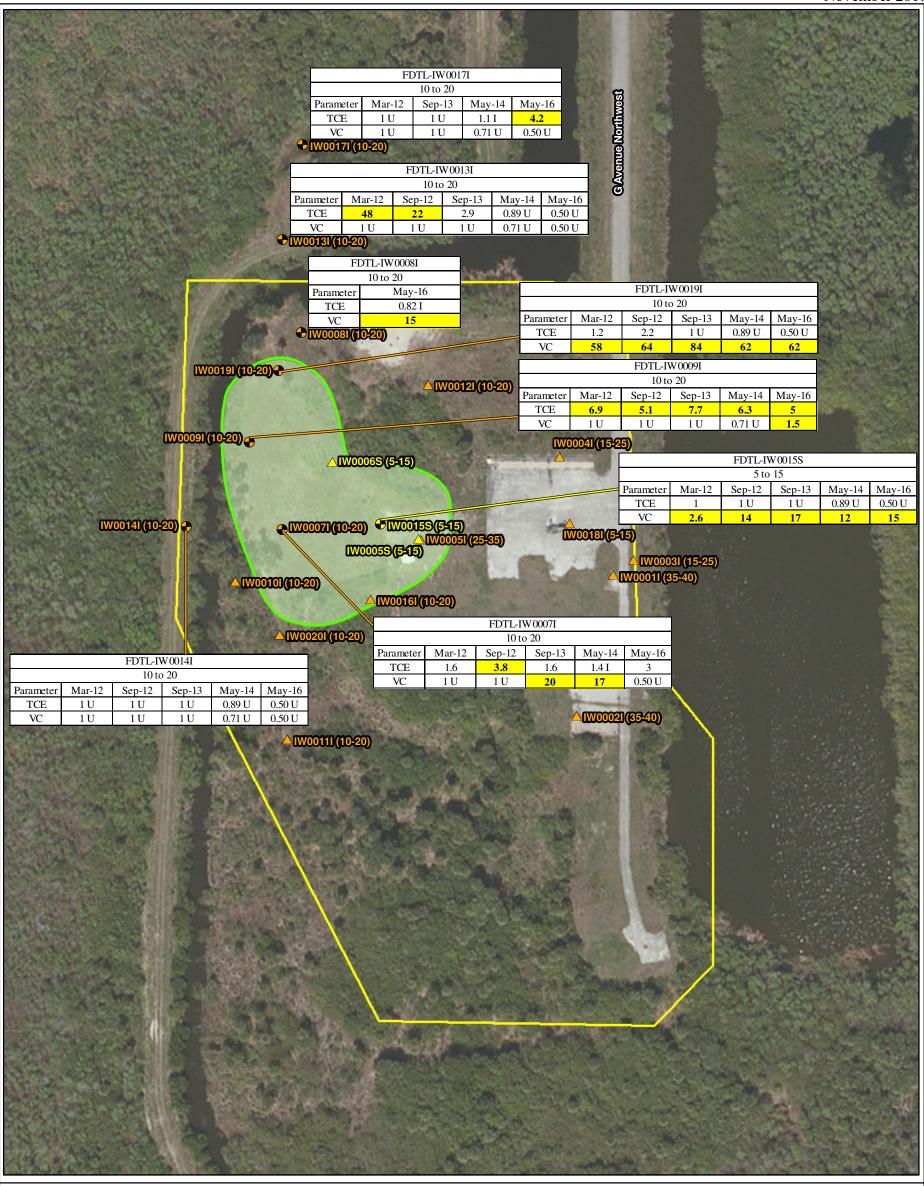


Figure 4-5 FDTL Area Summary of Trichloroethene and Vinyl Chloride Results in Groundwater

Screening Criteria

Abbreviation

TCE

VC

Parameter

Trichloroethene

Vinyl Chloride

Legend

- Shallow Monitoring Well Location (screen interval) **•** Shallow Monitoring Well Location (screen interval)
 - (Water Level Only Collected)
- Intermediate Monitoring Well Location (screen interval)
- Intermediate Monitoring Well Location (screen interval) (Water Level Only Collected)
- Aggressive Remediation Zone

Former Development Testing Lab

	Note
NADC	1. Sc

300

100

- Screen interval is presented in feet, below land surface (ft, BLS).
- 2. Results presented in µg/L.
 3. I indicates analyte detected below quantitation limits.
- 4. U indicates undetected.
- 5. GCTL indicates Groundwater Cleanup Target Levels (Chapter 62-777, FAC). 6. NADC indicates Natural Attenuation Default Concentration (Chapter 62-777, FAC).
- 7. Yellow shaded, bold text indicates exceedance of GCTL.
- 8. Previous data reported in the FDTL Corrective Measures Implementation 2014 Annual Groundwater Monitoring Report, February 2015. 100

SECTION V

C-5 ELECTRICAL SUBSTATION AREA (SWMU 66) RESULTS

5.1 WATER LEVELS AND GROUNDWATER FLOW DIRECTION

Groundwater levels in the C-5ES Area were collected on 27 May 2016 and are summarized in Table 5-1. In addition, select historical data of depth to groundwater and groundwater elevation data is summarized in this table. The inferred groundwater flow in the shallow zone in May 2016 was generally to the west (Figure 5-1). The inferred groundwater flow in the intermediate zone in May 2016 was to the west (Figure 5-2). This is generally consistent with prior observations of groundwater flow at the site.

Hydrographs for the shallow and intermediate zones are presented on Figures 5-3 and 5-4, respectively. The hydrographs indicate that there was a slight decrease in groundwater elevations measured in shallow and intermediate monitoring wells. In general, historic groundwater elevation data appears to vary seasonally with elevations being higher in the fall than the spring. The shallow groundwater zone appears to be the most sensitive to seasonal influences, which is expected because it has more direct contact with atmospheric conditions and it is more readily affected by stormwater runoff and evapotranspiration than the intermediate zone. Aside from seasonal fluctuations, the overall trend indicates that groundwater elevations have generally been consistent in the intermediate zone. Groundwater elevation data collected in the intermediate and shallow zone during the 2016 sampling event are consistent with historic observations in both zones. On average, groundwater elevations in the shallow and intermediate zones were less than 1 foot lower in spring 2016 than fall 2014.

5.2 LABORATORY ANALYTICAL RESULTS

A summary of the historical and current analytical results (May 2007 to the present) for the wells sampled, as part of this LTM plan, are presented in Table 5-2. This table has been constructed to include historical and current results associated with the contaminants of concern for this area, primarily VOCs. A summary of the 2016 VC analytical results, in addition to VC results from the previous five years, is provided on Figure 5-5. Laboratory analytical reports are presented in Appendix C.

The 2016 analytical results revealed exceedances of the FDEP GCTL for VC of 1 microgram per liter (μ g/L) in two monitoring wells sampled during this event; shallow well C5ES-MW0018S and intermediate well C5ES-MW0019I. VC concentrations, above the GCTL, ranged from 23 μ g/L to 29 μ g/L, as shown in Table 5-2 and on Figure 5-5. VC was not detected above the Natural

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Attenuation Default Concentration (NADC) of 100 μ g/L in C5ES-MW0018S (23 μ g/L) and C5ES-MW0019I (29 μ g/L). These results are consistent with the November 2014 results.

5.3 TREND ANALYSIS

A statistical analysis of the LTM results for the C5ES Area wells was conducted using the Monitoring and MAROS software package (output is included in Appendix E). The output indicated that the VC concentration trend for the wells evaluated was as follows:

- C5ES-MW0012S, C5ES-MW0017S, C5ES-MW0010I and C5ES-MW0012I showed decreasing trends;
- C5ES-MW0018S showed a probable increasing trend; and
- C5ES-MW0019I showed a stable trend.

Although C5ES-MW0018S VC concentrations have remained below NADC since November 2014, the monitoring well has an increasing trend with data sourced from 1999 through 2016 is used in MAROS. When a five-year dataset (sourced from 2012 to 2016) is used in MAROS, C5ES-MW0018S has a decreasing trend.

Table 5-1. C5ES Groundwater Elevations

			05/1	9/10	11/09	9/10	05/0	9/11	10/2	8/11	11/2	8/12	5/30-	31/13	11/1	9/14	05/2	27/16
Well ID	Screened Interval (ft BLS)	TOC Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)														
Shallow Wells																		
C5ES-MW0001S	5 to 15	7.66	6.57	1.09	7.61	0.05	8.15	-0.49	6.91	0.75	7.26	0.40	7.29	0.37	6.64	1.02	7.35	0.31
C5ES-MW0002S	5 to 15	6.74	5.53	1.21	6.57	0.17	7.09	-0.35	5.77	0.97	6.34	0.40	6.20	0.54	5.58	1.16	6.30	0.44
C5ES-MW0003S	5 to 15	6.84	5.73	1.11	6.80	0.04	7.32	-0.48	6.06	0.78	6.37	0.47	6.47	0.37	5.81	1.03	6.50	0.34
C5ES-MW0004S	5 to 15	6.64	5.48	1.16	6.71	-0.07	7.29	-0.65	6.04	0.60	6.29	0.35	6.50	0.14	5.80	0.84	6.46	0.18
C5ES-MW0005S	5 to 15	7.11	6.12	0.99	7.13	-0.02	7.67	-0.56	6.38	0.73	6.82	0.29	6.81	0.30	6.13	0.98	6.92	0.19
C5ES-MW0007S	5 to 15	8.10	6.64	1.46	7.57	0.53	8.40	-0.30	7.04	1.06	7.40	0.70	7.12	0.98	N.	M	N	M
C5ES-MW0008S	3 to 13	8.52	7.31	1.21	8.36	0.16	8.86	-0.34	7.60	0.92	8.01	0.51	7.97	0.55	7.29	1.23	N	M
C5ES-MW0009S	5 to 15	8.33	7.21	1.12	8.24	0.09	8.76	-0.43	7.51	0.82	7.89	0.44	7.91	0.42	7.23	1.10	N	M
C5ES-MW0010S	10 to 15	7.89	7.49	0.40	8.10	-0.21	8.91	-1.02	7.43	0.46	7.63	0.26	7.97	-0.08	7.29	0.60	7.89	0.00
C5ES-MW0011S	10 to 15	4.40	N	M	2.37	-0.28	2.99	1.41	1.78	0.31	N	M	N	M	3.80	0.60	4.55	-0.15
C5ES-MW0012S	10 to 15	2.10	1.59	0.51	2.31	-0.21	2.91	-0.81	1.68	0.42	1.56	0.54	2.20	-0.10	1.43	0.67	2.10	0.00
C5ES-MW0013S	9.5 to 14.5	7.98	6.80	1.18	7.57	0.41	7.92	0.06	6.87	1.11	7.42	0.56	7.24	0.74	6.82	1.16	7.32	0.66
C5ES-MW0016S	7 to 12	5.05	5.35	-0.30	5.53	-0.48	6.19	-1.14	5.14	-0.09	4.79	0.26	N	M	4.91	0.14	5.40	-0.35
C5ES-MW0017S	7 to 12	3.23	4.78	-1.55	4.73	-1.50	4.35	-1.12	3.39	-0.16	3.02	0.21	5.50	-2.27	3.10	0.13	3.60	-0.37
C5ES-MW0018S	7 to 12	3.47	4.55	-1.08	3.93	-0.46	4.56	-1.09	3.57	-0.10	3.31	0.16	2.95	0.52	3.29	0.18	3.82	-0.35
C5ES-PZ0001	5 to 15	7.57	6.56	1.01	7.60	-0.03	8.23	-0.66	6.46	1.11	7.13	0.44	7.15	0.42	6.69	0.88	7.26	0.31
Intermediate Wells																		
C5ES-MW0001I	28 to 33	7.98	6.56	1.42	7.67	0.31	7.43	0.55	6.61	1.37	7.41	0.57	6.56	1.42	6.94	1.04	7.56	0.42
C5ES-MW0003I	28 to 33	6.86	6.91	-0.05	6.81	0.05	7.32	-0.46	6.12	0.74	6.44	0.42	6.52	0.34	5.89	0.97	7.56	-0.70
C5ES-MW0004I	28 to 33	6.88	6.15	0.73	6.97	-0.09	7.55	-0.67	6.25	0.63	6.57	0.31	6.74	0.14	6.07	0.81	6.75	0.13
C5ES-MW0010I	20 to 25	8.04	7.70	0.34	8.28	-0.24	8.89	-0.85	7.72	0.32	7.73	0.31	8.13	-0.09	7.46	0.58	8.06	-0.02
C5ES-MW0012I	20 to 25	2.05	1.78	0.27	2.31	-0.26	2.95	-0.90	1.84	0.21	1.81	0.24	2.20	-0.15	1.50	0.55	2.15	-0.10
C5ES-MW0013I	33 to 38	8.03	6.78	1.25	7.60	0.43	7.97	0.06	6.82	1.21	7.39	0.64	7.19	0.84	6.75	1.28	7.33	0.70
C5ES-MW0014I	33 to 38	4.81	3.56	1.25	4.30	0.51	4.74	0.07	3.65	1.16	4.15	0.66	3.96	0.85	3.50	1.31	4.12	0.69
C5ES-MW0015I	33 to 38	4.47	3.12	1.35	3.92	0.55	4.26	0.21	3.19	1.28	3.76	0.71	3.51	0.96	N.	M	N	M
C5ES-MW0019I	13 to 23	2.56	2.15	0.41	2.76	-0.20	3.36	-0.80	2.02	0.54	2.31	0.25	2.65	-0.09	1.92	0.64	2.60	-0.04

- Notes:
 1. ft = feet.
 2. BLS = Below Land Surface.
- 3. TOC = Top of Casing.4. NAVD88 = North American Vertical Datum 1988.
- 5. BTOC = Below Top of Casing.
- 6. NM = Not Measured.

Table 5-2. C5ES Summary of Historical Groundwater Data

Scre	ened Interva	Well ID:								IW0010I o 25						
Sere		nple Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screenin	g Criteria	•						-		-			-		
	s (μg/L)															
VOCs (µg/L)	GCTL N S (μg/L) robenzene 100 1															
Chlorobenzene	100	1000	0.50 U	0.20 U	0.25 I	0.22 U	0.22 U	0.15 U	0.42 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Tetrachloroethene	3	300	0.50 U	0.25 U	0.25 U	0.22 U	0.22 U	0.22 U	0.17 U	0.11 I	0.11 U	0.11 U	0.11 U	0.11 U	0.58 U	0.58 U
Trichloroethene	3	300	0.76 I	0.38 U	0.38 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	3.5	0.28 U	2.6	0.5 I	2.3	0.7 I	0.38 I	0.75 I	0.66 I	0.37 I	0.55 I	0.36 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.75 I	0.20 U	1.6	0.45 U	1.8	0.68 I	0.39 U	0.49 I	0.46 I	0.34 I	0.64 I	0.43 I	0.50 U	0.50 U
1,1-Dichloroethane	70	700	10.2	0.25 U	39.7	3.2	37.5	9.4	1.3	1.9	1.2	0.46 I	2.3	0.13 U	0.50 U	0.50 U
1,1-Dichloroethene	Cs (μg/L) 100 10 orobenzene 100 10 rachloroethene 3 3 chloroethene 70 7 ss-1,2-Dichloroethene 100 10 Dichloroethane 70 7 Dichloroethene 7 7				0.23 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl chloride	Screened Interval (f Sampl Screening C GCTL N Screening C Screening C GCTL N Screening C GCTL N Screening C Screening C GCTL N Screening C GCTL N Screening C Screening C Screening C GCTL N Screening C Screeni				92.6	6.7	59.5	17	3.6	5.3	4.7	0.22 U	6.7	2.0	0.63 I	0.50 U

Scree	Screened Interval Samp Screening GCTL Dene 100 ethene 3 ethene 3 ethene 70 ethoroethene 100 ethoroethene 70 ethoroethene 70 ethoroethene 70									W0012S o 15						
Select		nple Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screenin	g Criteria	-		-		•		-		-			-		-
	GCTL	NADC														
VOCs (µg/L)																
Chlorobenzene	100	1000	2.1	0.88 I	8.7	1.7	13.7	1.9	3.1	1.3	3.3	2.6	2.6	4.8	3.9	4.1
Tetrachloroethene	3	300	0.50 U	0.25 U	0.25 U	0.22 U	0.22 U	0.22 U	0.17 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.58 U	0.58 U
Trichloroethene	3	300	0.50 U	0.38 U	0.38 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.50 U	2.2	0.58 I	0.48 I	0.31 I	0.41 I	0.35 I	1.1	0.36 U	0.99 I	0.91 I	0.36 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.50 U	0.64 I	0.81 I	0.45 U	0.45 U	0.13 U	0.39 U	0.4 I	0.15 I	0.41 I	0.35 I	0.12 U	0.50 U	0.50 U
1,1-Dichloroethane	70	700	0.53 I	0.81 I	0.85 I	0.24 U	0.25 I	0.56 U	0.37 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.50 U	0.50 U
1,1-Dichloroethene	Screening Cr GCTL N N N N N N N N N N			0.23 U	0.23 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl chloride	Screening C GCTL N			17.0	21.5	1.2	3.1	3.9	0.16 U	5.4	1.4	10	5.0	0.22 U	0.50 U	0.50 U

Scre	ened Interva	Well ID:							C5ES-M	IW0012I o 25						
		nple Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screenin	g Criteria									·					
	GCTL	NADC														
VOCs (µg/L)																
Chlorobenzene	100	1000	0.50 U	0.20 U	0.32 I	0.22 U	0.29 I	0.15 U	0.91 I	0.24 I	0.47 I	0.41 I	0.22 I	0.16 U	0.50 U	0.50 U
Tetrachloroethene	3	300	0.50 U	0.25 U	0.25 U	0.22 U	0.22 U	0.22 U	0.17 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.58 U	0.58 U
Trichloroethene	3	300	0.50 U	0.38 U	0.38 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	1.1	0.96 I	2.1	4.6	2.2	2.6	1.7	1.5	1.3	1.1	0.59 I	0.36 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.57 I	0.20 U	1.1	1.1	1.3	1.2	0.43 I	0.44 I	0.78 I	0.57 I	0.62 I	0.12 U	0.50 U	0.65 I
1,1-Dichloroethane	70	700	1.4	0.25 U	1.4	1.9	1.6	1.3	0.37 U	0.13 U	0.43 I	0.13 U	0.13 U	0.13 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.23 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl chloride	1	100	4.1	3.0	10.4	26.9	7.6	13	9.9	1.1	4.5	2.3	2.4	0.22 U	0.50 U	0.50 U

- 1. ft BLS = feet Below Land Surface.
- 2. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 3. I = analyte detected below quantitation limits.
- 4. J = estimated value below the reporting limit.
- 5. Q = Holding time exceeded.

- 6. U = Undetected.
- 7. $\mu g/L = micrograms per liters$.
- 8. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
- 9. Yellow shaded, bold text indicates exceedance of GCTL.
- 10. Orange shaded, bold text indicates exceedance of GCTL and NADC.

11. NA = Not Analyzed.

Table 5-2. C5ES Summary of Historical Groundwater Data

Come	and Internet	Well ID:								IW0017S o 12						
Scre		nple Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
			<u> </u>		, , , , , , , , , , , , , , , , , , ,		<u> </u>							, , , , , , , , , , , , , , , , , , ,		
	16 /															
VOCs (µg/L)	Cs (μg/L)															
Chlorobenzene	probenzene 100 10				4.8	5.8	5.1	3.7	5.6	6.4	4.5	2.2	1.6	0.16 U	0.50 U	0.95 I
Tetrachloroethene	3	300	0.50 U	0.25 U	0.25 U	0.22 U	0.22 U	0.22 U	0.17 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.58 U	0.58 U
Trichloroethene	3	300	0.50 U	0.38 U	0.38 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.66 I	0.28 U	0.52 I	0.38 I	0.63 I	0.43 I	0.31 I	0.36 U	0.56 I	0.52 I	0.59 I	0.36 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.65 I	0.20 U	0.64 I	0.49 I	0.69 I	0.54 I	0.39 U	0.29 I	0.43 I	0.3 I	0.30 I	0.12 U	0.50 U	0.50 U
1,1-Dichloroethane	70	700	0.51 I	0.25 U	0.44 I	0.38 I	0.43 I	0.56 U	0.37 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.23 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl chloride	Screened Interval (ft				4.8	4.5	5.1	2.7	3.9	1.4	1.5	0.68 I	0.52 I	0.22 U	0.50 U	0.50 U

		Well ID:							C5ES-M	W0018S						
Scre	ened Interva	ıl (ft BLS):							7 to	12						
	Sai	mple Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screenir	ng Criteria														
	GCTL	NADC														
VOCs (μg/L)																
Chlorobenzene	100	1000	0.50 U	0.20 U	0.3 I	0.23 I	0.37 I	0.15 U	0.42 U	0.31 I	0.22 I	0.16 U	0.37 I	0.16 U	0.50 U	0.50 U
Tetrachloroethene	3	300	0.50 U	0.25 U	0.25 U	0.22 U	0.22 U	0.22 U	0.17 U	0.11 U	0.58 U	0.58 U				
Trichloroethene	3	300	0.50 U	0.38 U	0.38 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.50 U	0.50 U				
cis-1,2-Dichloroethene	70	700	3.4	7.2	8.7	1.6	4.9	31	0.68 I	4.3	1.6	1.3	1.5	0.85 I	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	3.4	6.6	6.2	5.2	9.4	13	3.6	6.6	5.1	4.3	8.6	7.7	3.9	1.7
1,1-Dichloroethane	70	700	7.5	9.4	9.5	5.9	13.4	9.2	2.1	3.8	2.7	2.1	3.5	2.8	1.3	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.23 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.50 U	0.50 U				
Vinyl chloride	1	100	84.6	116	129	121	174	210	71	130	130	110	170	160	96	23

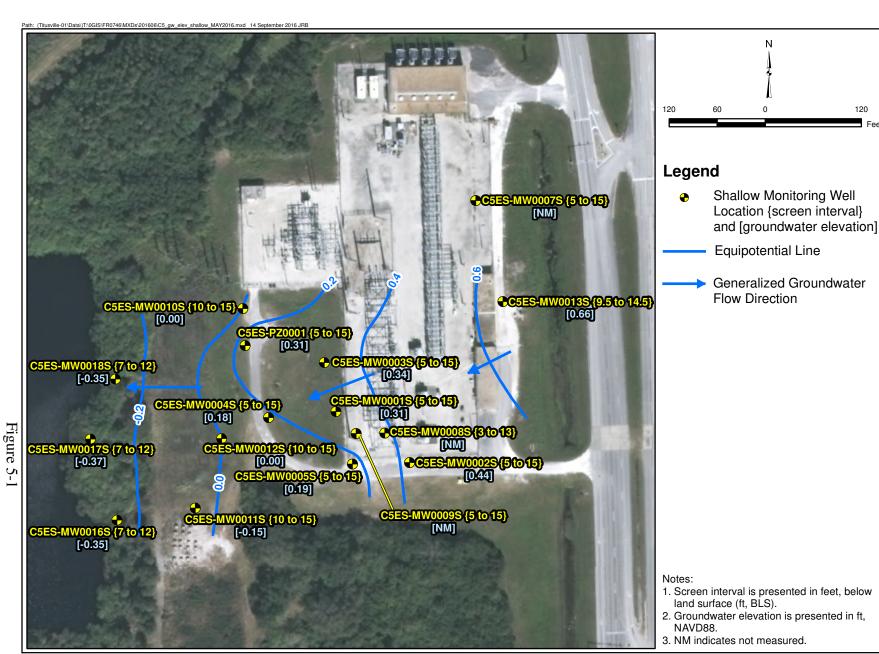
		Well ID:						C:	5ES-MW001	19I					
Scree	ned Interva	l (ft BLS):							13 to 23						
	Sar	nple Date:	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screenin	g Criteria													
	GCTL	NADC													
VOCs (μg/L)	ZL) zene 100														
Chlorobenzene	100	1000	0.20 U	0.89 I	0.57 I	0.65 I	0.43 I	0.42 U	0.41 I	0.44 I	0.34 I	0.45 I	0.16 U	0.50 U	0.50 U
Tetrachloroethene	3	300	0.25 U	0.25 U	0.22 U	0.22 U	0.22 U	0.17 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.58 U	0.58 U
Trichloroethene	3	300	0.38 U	0.38 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	12.3	6.2	3.4	2.6	1.6	6.4	9.6	7.1	6.7	1.2	37	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	8.2	8.4	8	6.5	5.9	5.9	7.2	8	7.4	7.8	9.8	0.50 U	1.7
1,1-Dichloroethane	70	700	20.5	16.6	15.6	10.2	8.7	6.8	6.1	5.9	4.8	4.2	2.3	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.23 U	0.23 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl chloride	1	100	189	206	183	101	120	140	150	180	190	160	180	5.4	29

- 1. ft BLS = feet Below Land Surface.
- 2. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 3. I = analyte detected below quantitation limits.
 4. J = estimated value below the reporting limit.
 5. Q = Holding time exceeded.

- 6. U = Undetected. 7. µg/L = micrograms per liters
- 8. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
 9. Yellow shaded, bold text indicates exceedance of GCTL.
- 10. Orange shaded, bold text indicates exceedance of GCTL and NADC.

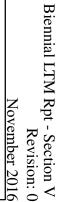
11. NA = Not Analyzed.

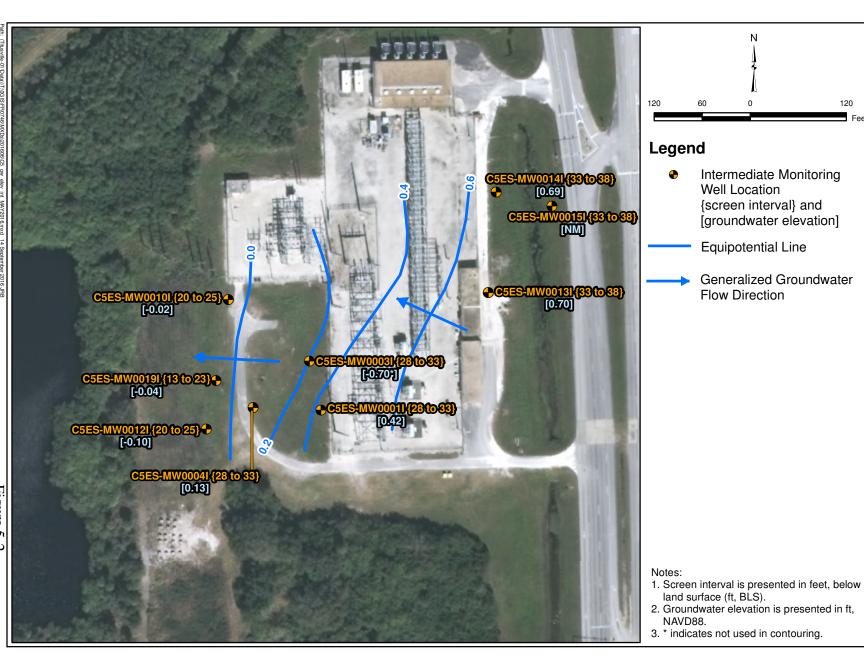
120



C5ES Shallow Zone Potentiometric Surface Map – May 2016

120





5-11/5-12

Figure 5-3. C5ES Hydrographs and Trend Plot of Vinyl Chloride in Shallow Wells

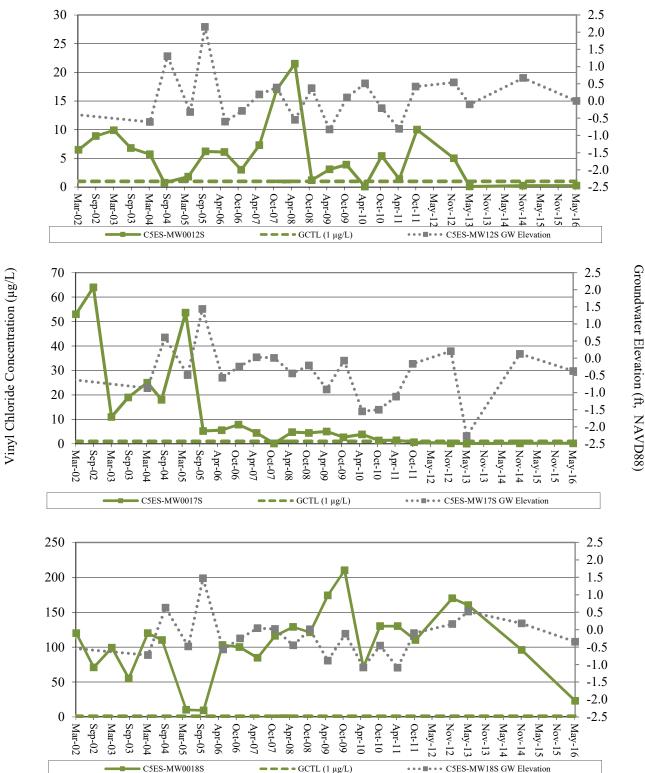
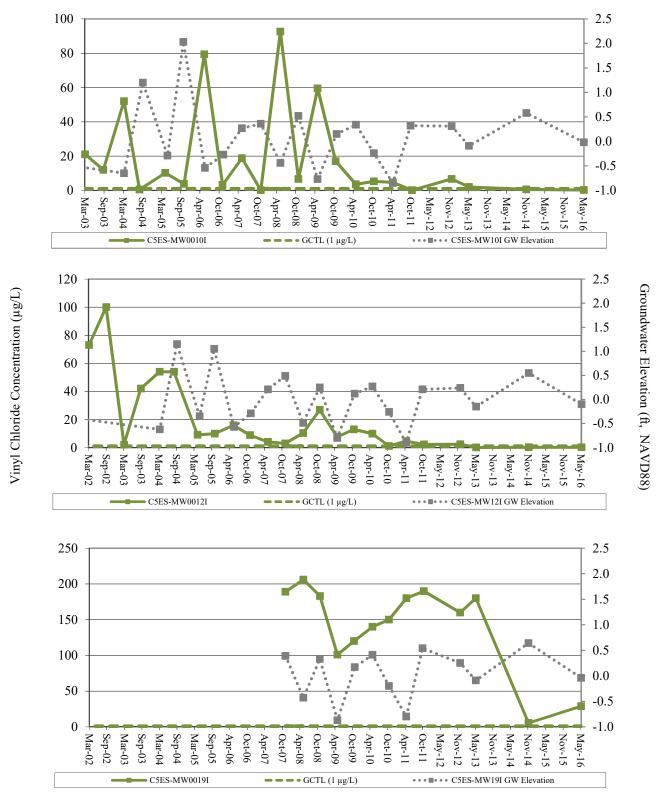
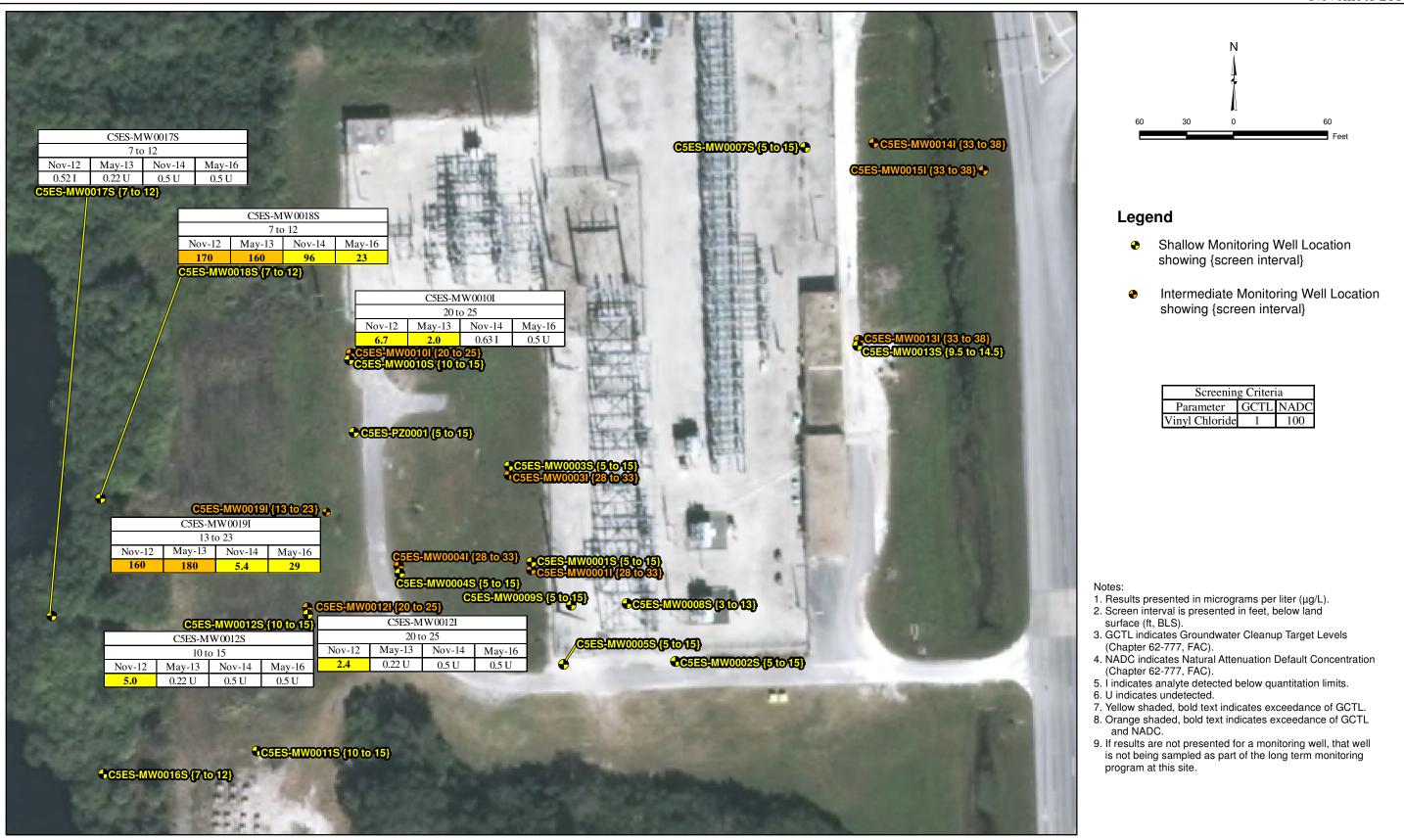


Figure 5-4. C5ES Hydrographs and Trend Plot of Vinyl Chloride in Intermediate Wells



November 2016



SECTION VI

SHUTTLE FLIGHT OPERATIONS CONTRACT GENERATOR MAINTENANCE FACILITY AREA (SWMU 81) RESULTS

6.1 WATER LEVELS AND GROUNDWATER FLOW DIRECTION

Groundwater levels in the SFOC Area were collected on 24 May 2016 and are summarized in Table 6-1. In addition, select historical data of depth to groundwater and groundwater elevation data are summarized in this table. Water levels recorded in the shallow zone in May 2016 indicate that groundwater flow is generally toward the northwest (Figure 6-1). The groundwater flow directions observed during 2016 were generally consistent with previously observed groundwater flow.

A hydrograph for the shallow zone is presented as Figure 6-2. The hydrographs indicate that there was a slight decrease in groundwater elevations measured in shallow monitoring wells. The hydrograph appears to indicate a seasonal pattern with higher groundwater elevations in the fall compared to elevations in the spring until May 2010. Groundwater elevations since May 2010 do not appear to exhibit a pattern, nor do they appear to be seasonally influenced.

6.2 FIELD MEASUREMENT RESULTS

Temperature, pH, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), total dissolved solids (TDS), and turbidity were measured and recorded in the field during purging prior to monitoring well sampling during the 2016 LTM event. A summary of water quality parameters recorded is provided in Table 6-2.

6.3 LABORATORY ANALYTICAL RESULTS

A summary of the historical and current analytical results (2007 to the present) for the wells sampled as, part of this LTM plan, are presented in Table 6-3. The table has been constructed to include the results associated with the contaminant of concern for this facility, namely antimony. A summary of the 2016 antimony analytical results in addition to antimony results from May 2007 to the present are provided on Figure 6-3. Groundwater samples were collected from two SFOC site monitoring wells during the 2016 LTM event; SFOC-IW0001S and SFOC-IW0004S. Laboratory analytical reports are presented in Appendix C.

In 2016, the antimony concentration observed in SFOC-IW0001S was 21 μg/L, above the GCTL of

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 $6~\mu g/L$. Antimony in SFOC-IW0001S has decreased since the November 2012 sampling event (from 148 $\mu g/L$ to 21 $\mu g/L$). There appears to be a correlation between groundwater elevation and antimony concentration in SFOC-IW004S, indicating antimony may be present in the smear zone. Antimony in downgradient well SFOC-IW004S remains below laboratory method detection limits. Further evaluation of the area adjacent to SFOC-IW0001S by installing a new monitoring well with a screen interval greater than SFOC-IW0001S can be used to evaluate if the results from SFOC-IW0001S are more representative of the surficial aquifer conditions.

6.4 TREND ANALYSIS

Review of historical and current data for this facility indicates that antimony is the constituent of concern. A time trend plot of antimony concentrations detected in well SFOC-IW0001S is provided as Figure 6-2. Overall, there is no observed trend in antimony concentrations in SFOC-IW0001S.

Table 6-1. SFOC Groundwater Elevations

	Screened		05/2	0/10	11/8	8/10	05/0	9/11	11/0	1/11	11/2	7/12	05/29	9/13	11/19	9/14	05/2	4/16
Well ID	Interval (ft BLS)	TOC Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAVD88)
Shallow Wells																		
SFOC-IW0001S	2 to 12	6.92	3.67	3.25	6.18	0.74	6.10	0.82	2.8	4.12	5.31	1.61	4.40	2.52	4.15	2.77	5.01	1.91
SFOC-IW0002S	2 to 12	5.65	2.22	3.43	4.51	1.14	4.62	1.03	N	M	3.83	1.82	2.92	2.73	2.46	3.19	3.51	2.14
SFOC-IW0003S	2 to 12	4.88	1.65	3.23	3.92	0.96	4.09	0.79	N	M	3.11	1.77	2.15	2.73	2.05	2.83	2.90	1.98
SFOC-IW0004S	2 to 12	5.10	1.78	3.32	4.17	0.93	4.37	0.73	1.01	4.09	3.43	1.67	2.51	2.59	2.25	2.85	3.18	1.92
SFOC-IW0005S	2 to 12	3.76	0.87	2.89	2.98	0.78	3.13	0.63	0.00	3.76	2.34	1.42	1.42	2.34	1.15	2.61	2.11	1.65
SFOC-IW0006S	5 to 15	6.56	3.11	3.45	5.58	0.98	5.59	0.97	N	M	4.71	1.85	3.93	2.63	3.75	2.81	4.45	2.11

- 1. BLS = Below Land Surface.
- 2. BTOC = Below Top of Casing.
- 3. ft = feet.
- 4. NAVD88 = North American Vertical Datum 1988.
- 5. NM = Not Measured.
- 6. TOC = Top of Casing.

Table 6-2. SFOC Groundwater Quality Parameters

Well ID	Screened Interval (ft BLS)	Date	Temperature (°C)	pH (S.U.)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Total Dissolved Solids (g/L)	Turbidity (NTU)	Color
SFOC-IW0001S	2 to 12	11/21/14	25.00	5.50	0.13	1.29	30.20	0.08	6.13	clear
31-0C-1W00013	2 10 12	5/24/16	25.40	5.91	0.28	0.35	-21.70	0.18	6.27	clear
SFOC-IW0004S	2 to 12	11/21/14	26.00	6.01	0.20	1.20	47.90	0.14	11.90	clear
3FOC-1W00043	2 10 12	5/24/16	24.46	5.36	0.17	0.12	-61.1	0.11	13.8	clear

- 1. ft BLS = feet below land surface.
- 2. °C = degrees Celsius.
- 3. S.U. = Standard Units.
- 4. mS/cm = milliSiemens per centimeter.
- 5. mg/L = milligram per liter.
- 6. mV = millivolts.
- 7. g/L = gram per liter.
- 8. NTU = Nephelometric Turbidity Units.

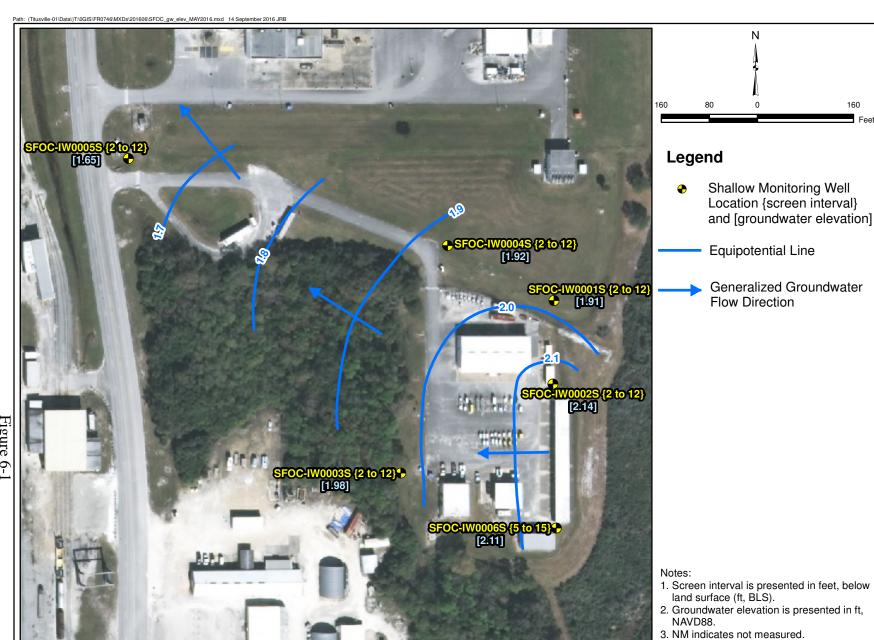
Table 6-3. SFOC Summary of Historical Groundwater Data

		Well ID:					SFOC-I	W0001S				
Screene	d Interva	1 (ft BLS):					2 to	12				
	Sar	nple Date:	May-07	Jan-08	Nov-08	May-09	Nov-10	May-11	Nov-12	May-13	Nov-14	May-16
	Screening	ng Criteria										
	GCTL	NADC										
Metals (µg/	L)											
Antimony	6	60	3.4 U	74.0	49.7	7.0	26	67	148	82	78	21

		Well ID:					SFOC-I	W0004S				
Screene	d Interva	1 (ft BLS):					2 to	12				
	Sar	nple Date:	May-07	Nov-07	Nov-08	May-09	Nov-10	May-11	Nov-12	May-13	Nov-14	May-16
Scre	ening Cri	iteria										
	GCTL	NADC										
Metals (µg/	L)											
Antimony	6	60	3.4 U	NA	5.3 I	4.5 U	0.8 I	0.7 I	0.120 U	0.180 I	0.84 U	0.85 U

- 1. ft BLS = feet Below Land Surface.
- 2. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 3. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
- 4. μ g/L = micrograms per liter.
- 5. Yellow shaded, bold text indicates exceedance of GCTL.
- 6. Orange shaded, bold text indicates exceedance of GCTL and NADC.
- 7. U = Undetected.
- 8. NA = Not Analyzed.
- 9. I = analyte detected below quantitation limits.

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SFOC Shallow Zone Potentiometric Surface Map – May 2016 Figure 6-1

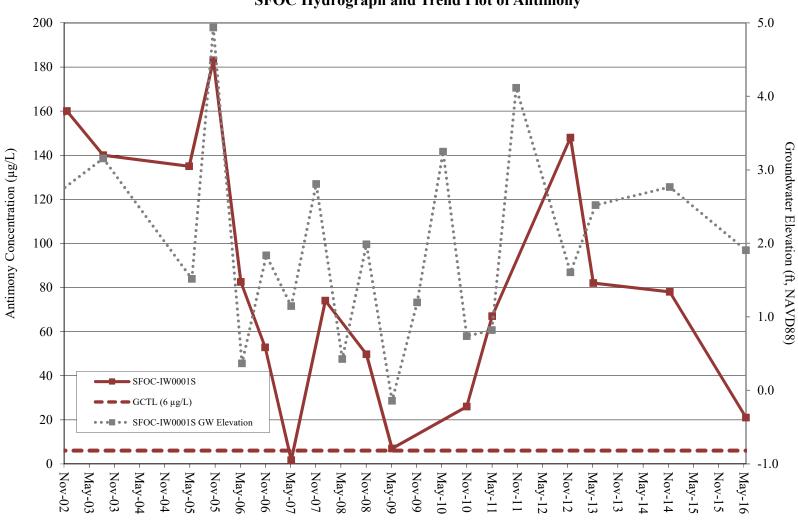
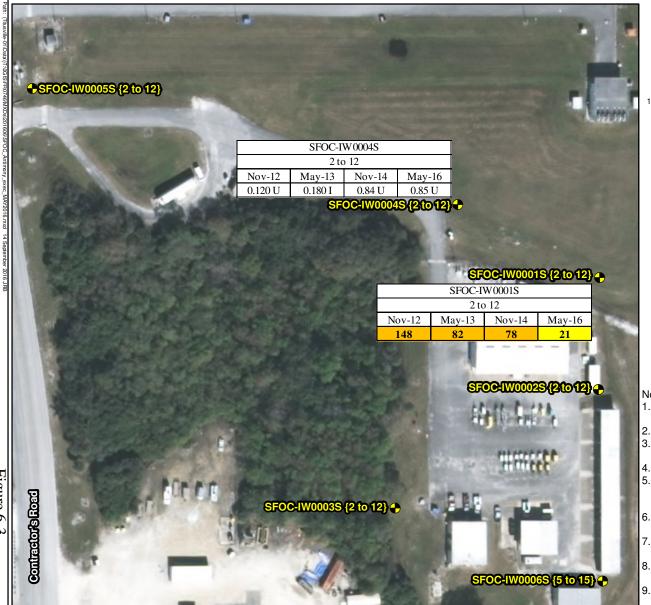
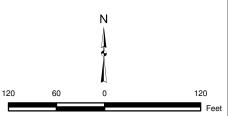


Figure 6-2 SFOC Hydrograph and Trend Plot of Antimony

November 2016





Legend

Shallow Monitoring Well Location (screen interval)

Scree	ening Crite	eria									
Parameter GCTL NADC											
Antimony	6	60									

- 1. Screen interval is presented in feet, below land surface (ft, BLS).
- Results are presented in μg/L.
 I indicates analyte detected below quantitation limits.
- 4. U indicates undetected.
- 5. GCTL indicates Groundwater Cleanup Target Levels
- (Chapter 62-777, FAC).
 6. NADC indicates Natural Attenuation Default Concentration (Chapter 62-777, FAC).
- 7. Yellow shaded, bold text indicates exceedance of GCTL.
- 8. Orange shaded, bold text indicates exceedance of GCTL and NADC.
- 9. If results are not presented for a monitoring well, that well is not being sampled as part of the long term monitoring program at this site

SECTION VII

VEHICLE ASSEMBLY BUILDING AREA (SWMUS 40, 44, 56, 72, 74, 80, 83, 101, and 108) RESULTS

7.1 WATER LEVELS AND GROUNDWATER FLOW DIRECTION

Groundwater levels were recorded in the VAB Area on 23 May 2016 and are summarized in Table 7-1. In addition, select historical data of depth to groundwater and groundwater elevation data is summarized in this table. The hydrographs indicate that there was a slight decrease in groundwater elevations measured in shallow and intermediate monitoring wells. In general, in each zone, a radial groundwater flow pattern was inferred, with groundwater flow to the northnorthwest in the northern portion of the site and generally to the southeast south of the VAB (Figures 7-1 through 7-3).

Hydrographs for the shallow, intermediate, and deep zones are presented as Figures 7-4 through 7-9, respectively. Generally, the hydrographs are similar in that they appear to show seasonal patterns with higher groundwater elevations in the fall than in the spring until May 2009. Groundwater elevations since May 2009 do not appear to exhibit a pattern, nor do they appear to be seasonally influenced. On average, groundwater levels decreased by approximately 0.15 foot between spring 2016 and fall 2014.

7.2 FIELD MEASUREMENT RESULTS

Temperature, pH, conductivity, DO, ORP, TDS, and turbidity were measured and recorded in the field during purging prior to monitoring well sampling during the 2016 LTM event. For the two wells (MLPV-SAMW0001 and MLPV-SAMW0003) sampled utilizing low flow purging techniques, a summary of the water quality parameters recorded is provided in Table 7-2.

7.3 LABORATORY ANALYTICAL RESULTS

A summary of the historical and current analytical results (May 2007 to the present) for the wells sampled as part of this LTM plan are presented in Table 7-3. This table includes all historical and current results associated with the contaminants of concern for this facility, namely VOCs. A summary of available VC results for the past five years in the shallow, intermediate, and deep zones are provided as Figures 7-10, 7-11, and 7-12, respectively. Laboratory analytical reports are presented in Appendix C.

Revision: 0 November 2016

7.3.1 VOCS IN SHALLOW WELLS.

The 2016 analytical results revealed an exceedance of the VC GCTL in WCPS-IW0001SR (28 μ g/L). No VOC exceedance was noted in the groundwater sample collected from PCCA-MW0004 for this sampling event.

7.3.2 VOCS IN INTERMEDIATE WELLS.

In 2016, the VC GCTL was exceeded in three of 13 sampled intermediate monitoring wells: MLPV-IW0028I, MLPV-IW0046, and MLPV-IW0053. The VC concentrations in MLPV-IW0028I, MLPV-IW0046, and MLPV-IW0053 were 4 μ g/L, 8.1 μ g/L, and 52 μ g/L, respectfully. No other VOC exceedances were noted in groundwater samples collected from intermediate wells for this sampling event.

7.3.3 VOCS IN DEEP WELLS.

In 2016, the VC GCTL was exceeded in three of the 15 sampled deep monitoring wells: MLPV-IW0029D, MLPV-IW0052, and MLPV-SAMW0003. VC concentrations detected above the GCTL ranged from 27 μ g/L to 80 μ g/L. No other GCTL or NADC exceedances were noted in groundwater samples collected from deep wells for this sampling event. These VC concentrations were generally consistent with historic concentrations observed at each well.

7.3.4 TREND ANALYSIS

Review of historical and current data for this facility indicates that trichloroethene (TCE), cis-1,2-dichloroethene (cDCE), trans-1,2-dichloroethene (tDCE), and VC have been the primary constituents of concern. However, TCE, cDCE, and tDCE have not been detected in currently monitored wells at concentrations exceeding their respective GCTLs since November 2006 in VAB Area wells. A statistical analysis of the VC results for the VAB Area wells was conducted using the MAROS software package. Wells with results from at least five sampling events were included in the analysis. A summary of the software output is included in Appendix D. There are no increasing trends in the VAB Area wells. The VC concentration trend output for the wells evaluated was as follows:

• Shallow Zone: no trend observed in WCPS-IW0001SR, and probably decreasing trend in PCCA-MW0004.

• Intermediate Zone: decreasing trends in all seven monitoring wells (SATV-IW0009I, PRES-IW0007I, MLPV-IW0009I, MLPVIW0028I, MLPV-IW0006IR MLPV-IW0012I, and PCCA-MW0017).

Deep Zone: decreasing trends in four monitoring wells (MLPV-IW0009D, MLPV-IW0012D, MLPV-IW0029D, and MLPV-SAMW3) and no trend in two monitoring wells (MLPV-IW0018D and MLPV-SAMW3).

7.4 FORMER SOURCE AREA INTERIM GROUNDWATER MONITORING

Enhanced bioremediation of the source area was implemented from August 2006 until March 2009 using ethyl lactate as an electron donor. Enhanced bioremediation activities were completed in 2009 because the Corrective Action Objective was achieved (chlorinated VOC concentrations less than NADC). The former source area entered into interim groundwater monitoring (IGM; previously referred to as interim long-term monitoring) in 2009 with TCE, cDCE and tDCE concentrations below their respective GCTLs (with the exception of 5.2 μg/L TCE in the groundwater sample collected from monitoring well SAMW0001); therefore, the goal was to reduce VC concentrations in the former source area below the GCTL. After seven years of IGM, no rebound of CVOCs has been observed in the former source area monitoring wells. Results from the IGM sampling suggest that the remaining VC concentrations are generally stable, and two monitoring wells, SAMW0001 and SAMW003 were transferred to the LTM program. Results from the IGM sampling were included in the 2015 *Corrective Measures Implementation and Interim Measures Annual Report: Summary of Biosparge and Air Sparge System Operation and Maintenance* [NASA 2015].

7.5 AIR SPARGE SYSTEM

An air sparge system, designed to treat the area where TCE concentrations are greater than 300 µg/L and cDCE concentrations are greater than 7,000 µg/L, was installed in the area northeast of the former source area from June to August 2012. Between September 2012 to July 2015, the overall CVOC mass reduction is approximately 97%. Details of the air sparge system operation are included in the 2015 *Corrective Measures Implementation and Interim Measures Annual Report: Summary of Biosparge and Air Sparge System Operation and Maintenance* [NASA 2015].

Table 7-1. VAB Area Groundwater Elevations

			05/1	19/10	11/1	0/10	05/0	9/11	11/0	1/11	11/2	7/12	05/2	28/13	11/1	9/14	05/2	23/16
	Screened	TOC Elevation		Water		Water		Water		Water		Water		Water	Depth to	Water	Depth to	Water
Well ID	Interval	(ft NAVD88)	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Depth to Water	Elevation	Water	Elevation	Water	Elevation
	(ft BLS)	(It NAVD00)	(ft BTOC)	(ft NAVD88)	(ft BTOC)	(ft NAVD88)	(ft BTOC)	(ft NAVD88)	(ft BTOC)	(ft NAVD88)	(ft BTOC)	(ft NAVD88)	(ft BTOC)	(ft NAVD88)	(ft BTOC)	(ft NAVD88)	(ft BTOC)	(ft NAVD88)
				(It NAVD66)		(II NA VD66)		(It NAVD88)		(It NA vD88)		(II NA VD66)		(It NAVD88)	(пвтос)	(It NAVD00)	(пвтос)	(II NAVD88)
Shallow Wells		1	1	1 100					• • •	. =0			1			1.00		
MLPV-IW0001S	2 to 12	4.78	3.72	1.06	4.46	0.32	5.15	-0.37	3.00	1.78	4.21	0.57	3.51	1.27	3.70	1.08	3.63	1.15
VABU-IW0004S	3 to 13	6.52	3.87	2.65	4.74	1.78	4.94	1.58	3.90	2.62	4.17	2.35	4.13	2.39	4.03	2.49	4.24	2.28
OPF3-IW0006S	10 to 20	5.44	3.79	1.65	6.5	-1.06	5.14	0.30	3.10	2.34	4.37	1.07	3.76	1.68	3.75	1.69	4.3*	1.14
PRES-IW0001S	6 to 16	7.93	6.59	1.34	7.49	0.44	7.76	0.17	5.78	2.15	N.		6.55	1.38	6.37	1.56	6.82*	1.11
PRES-IW0006S	3 to 13	4.04	4.24	-0.20	6.55	-2.51	5.69	-1.65	5.42	-1.38	6.17	-2.13	4.45	-0.41	4.21	-0.17		JM
PRES-IW0007S	1 to 11	1.65	1.93	-0.28	2.71	-1.06	3.63	-1.98	1.73	-0.08	N.		2.14	-0.49	1.91	-0.26		IM
PCCA-MW0004	5 to 15	7.96	4.87	3.09	5.72	2.24	5.98	1.98	4.26	3.70	5.57	2.39	4.91	3.05	4.75	3.21	5.23	2.73
PCCA-MW0007	5 to 15	8.22	5.18	3.04	6.01	2.21	6.35	1.87	4.66	3.56	5.94	2.28	5.05	3.17	5.07	3.15	5.56	2.66
PCCA-MW0008	5 to 15	7.22	3.99	3.23	4.7	2.52	4.93	2.29	3.26	3.96	4.44	2.78	4.78	2.44	3.58	3.64	4.22	3.00
PCCA-MW0009	5 to 15	7.60	4.3	3.30	5.11	2.49	5.26	2.34	3.67	3.93	4.85	2.75	4.24	3.36	4.02	3.58	4.72	2.88
PCCA-MW0010	5 to 15	7.86	4.46	3.40	4.21	3.65	5.42	2.44	3.74	4.12	5.03	2.83	4.43	3.43	4.27	3.59	4.74	3.12
PCCA-MW0011	5 to 15	7.59	4.19	3.40	4.92	2.67	5.24	2.35	3.39	4.20	7.02	0.57	3.97	3.62	3.94	3.65	4.54	3.05
PCCA-MW0012	5 to 15	7.89	4.37	3.52	5.15	2.74	5.32	2.57	3.59	4.30	4.98	2.91	4.22	3.67	4.09	3.80	4.73	3.16
PCCA-MW0013	5 to 15	6.99	2.89	4.10	4.02	2.97	4.19	2.80	2.23	4.76	3.88	3.11	3.12	3.87	2.71	4.28	3.46	3.53
PCCA-MW0014	5 to 15	7.25	4.12	3.13	4.79	2.46	5.15	2.10	3.22	4.03	4.70	2.55	4.98	2.27	3.84	3.41	4.42	2.83
WCPS-IW0001SR	2.5 to 12.5	4.23	3.06	1.17	3.65	0.58	4.10	0.13	2.27	1.96	3.13	1.10	2.80	1.43	2.56	1.67	3.02	1.21
WCPS-IW0002SR	2.5 to 12.5	5.39	4.21	1.18	4.81	0.58	5.18	0.21	3.28	2.11	4.37	1.02	3.37	2.02	N			IM
WCPS-IW0005S	2 to 12	4.48	3.38	1.10	4.1	0.38	4.61	-0.13	2.84	1.64	3.72	0.76	3.40	1.08	3.05	1.43	3.45	1.03
WCPS-IW0006S	3 to 13	4.88	3.92	0.96	4.5	0.38	4.88	0.00	2.95	1.93	3.93	0.95	3.61	1.27	3.45	1.43	3.81	1.07
WCPS-IW0009S	2.5 to 12.5	5.30	3.84	1.46	4.64	0.66	5.06	0.24	3.06	2.24	4.19	1.11	3.88	1.42	3.63	1.67	4.02	1.28
WCPS-IW0010S	2.5 to 12.5	5.83	4.4	1.43	5.19	0.64	5.59	0.24	3.53	2.30	4.70	1.13	4.19	1.64	4.11	1.72		JM
WCPS-IW0012S	2 to 12	4.77	3.07	1.70	4.06	0.71	4.53	0.24	2.33	2.44	N.			IM	N			IM
WCPS-IW0013S	2.5 to 12.5	5.79	3.8	1.63	4.61	0.82	5.04	0.39	N.		4.26	1.17		IM	3.70	2.09	4.12	1.67
WCPS-IW0014S	4 to 14	6.88	5.16	1.72	5.98	0.90	6.37	0.51	4.25	2.63	5.63	1.25	4.98	1.90	4.92	1.96	5.36	1.52
WCPS-IW0015S	3 to 13	5.63	4.59	1.04	5.31	0.32	5.72	-0.09	4.23	1.40	4.83	0.80	4.71	0.92	4.56	1.07	4.90	0.73
Intermediate Wells		T	T					T										
MLPV-IW0002I	28 to 33	5.58	4.67	0.91	5.52	0.06	5.99	-0.41	3.98	1.60	5.00	0.58		IM		M		IM
MLPV-IW0006IR	28 to 33	2.87	2.82	0.05	2.86	0.01	3.50	-0.63	1.45	1.42	N.		3.84	-0.97	2.21	0.66	2.15	0.72
MLPV-IW0009I	28 to 33	5.78	4.38	1.40	5.49	0.29	5.94	-0.16	3.66	2.12	4.98	0.80	4.37	1.41	3.98	1.80	4.65	1.13
MLPV-IW0011I	35 to 40	4.03	2.2	1.83	3.53	0.50	3.90	0.13	1.48	2.55	2.99	1.04	2.32	1.71	1.21	2.82	2.65	1.38
MLPV-IW0012I	35 to 40	5.41	3.43	1.98	4.74	0.67	5.15	0.26	2.72	2.69	4.26	1.15	3.58	1.83	2.80	2.61	3.90	1.51
MLPV-IW0014I	35 to 40	5.24	3.15	2.09	4.42	0.82	4.73	0.51	2.39	2.85	N.		3.21	2.03	2.71	2.53	3.60	1.64
MLPV-IW0017I	35 to 40	5.85	3.97	1.88	5.32	0.53	5.69	0.16	3.25	2.60	4.82	1.03	4.16	1.69	3.45	2.40	4.45	1.40
MLPV-IW0027I	28 to 33	2.08	0.80	1.28	2.01	0.07	2.51	-0.43	0.64	1.44	1.53	0.55	0.96	1.12	1.43	0.65	1.50	0.58
MLPV-IW0028I	28 to 33	2.08	1.90	0.18	2.68	-0.60	3.16	-1.08	1.37	0.71	2.21	-0.13	1.72	0.36	1.71	0.37	2.06	0.02
MLPV-IW0046	35 to 45	2.70		IM	N.		N		N.		N.			IM	1.71	0.99	2.07	0.63
MLPV-IW0047	35 to 45	5.87		IM	N			M	N.			M		IM	3.19	2.68	4.80	1.07
MLPV-IW0053	35 to 45	4.76		IM	N			M	N.		N.			IM	2.93	1.83	3.60	1.16
MLPV-IW0056	30 to 40	7.90		<u>M</u>	ļ	<u>M</u>		M		M	N.			IM	5.77	2.13	6.09	1.81
PCCA-MW0015	15 to 25	8.11	5.12	2.99	6.03	2.08	6.34	1.77	4.55	3.56	5.84	2.27	5.24	2.87	5.00	3.11	5.55	2.56
PCCA-MW0016	15 to 25	7.33	4.17	3.16	5.12	2.21	5.49	1.84	3.62	3.71	4.89	2.44	4.27	3.06	4.10	3.23	4.62	2.71
PCCA-MW0017	15 to 25	7.59	4.35	3.24	5.34	2.25	5.68	1.91	3.78	3.81	5.16	2.43	4.48	3.11	4.30	3.29	4.82	2.77
PCCA-MW0018	15 to 25	7.55	4.33	3.22	5.31	2.24	5.66	1.89	3.71	3.84	5.04	2.51	4.47	3.08	4.30	3.25	4.80	2.75
PCCA-MW0019	15 to 25	7.01	3.68	3.33	4.71	2.30	5.05	1.96	3.14	3.87	4.45	2.56	3.91	3.10	3.66	3.35	4.18	2.83
PCCA-MW0020	25 to 35	7.38	4.19	3.19	5.18	2.20	5.50	1.88	3.68	3.70	4.96	2.42	4.35	3.03	4.10	3.28	4.62	2.76
WCPS-IW0016	15 to 25	4.57	N	IM	N	M	N	M	N.	M	N.	M	N	ΙM	3.15	1.42	2.52	2.05

- 1. ft = feet.
- 2. BLS = Below Land Surface.
- TOC = Top of Casing.
 NAVD88 = North American Vertical Datum 1988.
 BTOC = Below Top of Casing.
- 6. NM = Not Measured.
- 7. * = collected outside the 24 hour period as construction in the VAB impeded access.

Table 7-1. VAB Area Groundwater Elevations

			05/1	9/10	11/10	0/10	05/0	9/11	11/0	1/11	11/2	7/12	05/2	8/13	11/1	9/14	05/2	.3/16
Well ID	Screened Interval (ft BLS)	TOC Elevation (ft NAVD88)		Water Elevation (ft NAVD88)	Depth to Water (ft BTOC)	Water Elevation (ft NAV88)	Depth to Water (ft BTOC)	Water Elevation (ft NAV88)										
Intermediate Wells																		
PRES-IW0007I	32 to 37	4.62	3.49	1.13	4.30	0.32	4.84	-0.22	3.28	1.34	4.09	0.53	3.70	0.92	3.55	1.07	3.78	0.84
PRES-IW0008I	38 to 42	6.18	4.80	1.38	5.68	0.50	6.09	0.09	4.52	1.66	5.37	0.81	4.95	1.23	4.86	1.32	N	
SATV-IW0009I	22 to 27	6.93	4.85	2.08	6.90	0.03	6.21	0.72	4.28	2.65	5.63	1.30	4.84	2.09	4.89	2.04	5.25	1.68
SATV-IW0010	35 to 45	6.85	N.		N		N		N			M	N		4.87	1.98	5.25	1.60
TPF-MW0001	23 to 28	7.62	5.99	1.63	6.87	0.75	7.30	0.32	5.22	2.40	6.49	1.13	5.99	1.63	5.77	1.85	6.20	1.42
Deep Wells																		
MLPV-IW0001D	50 to 55	4.51	3.45	1.06	4.37	0.14	4.91	-0.40	3.00	1.51	3.87	0.64	3.42	1.09	3.71	0.80	3.85	0.66
MLPV-IW0009D	45 to 50	5.77	4.42	1.35	5.51	0.26	5.91	-0.14	3.68	2.09	4.95	0.82	4.35	1.42	4.08	1.69	4.61	1.16
MLPV-IW0012D	45 to 50	5.40	3.43	1.97	4.68	0.72	5.10	0.30	2.69	2.71	4.19	1.21	3.53	1.87	3.13	2.27	3.85	1.55
MLPV-IW0018D	50 to 55	8.78	6.63	2.15	8.02	0.76	8.23	0.55	5.91	2.87	7.41	1.37	6.73	2.05	6.71	2.07	7.25	1.53
MLPV-IW0022D	48 to 53	8.26	6.11	2.15	8.02	0.24	7.45	0.81	5.42	2.84	6.80	1.46	6.11	2.15	6.09	2.17	6.48	1.78
MLPV-IW0027D	45 to 50	1.99	0.85	1.14	2.02	-0.03	2.48	-0.49	0.63	1.36	1.46	0.53	1.07	0.92	1.20	0.79	1.48	0.51
MLPV-IW0028D	45 to 50	3.03	2.26	0.77	3.11	-0.08	3.59	-0.56	1.67	1.36	1.99	1.04	2.06	0.97	1.98	1.05	2.38	0.65
MLPV-IW0029D	42 to 47	6.84	4.66	2.18	5.88	0.96	6.19	0.65	3.88	2.96	5.46	1.38	4.70	2.14	4.47	2.37	5.06	1.78
MLPV-IW0048	40 to 50	4.23	N.		NI		N		N			M	N		2.59	1.64	2.91	1.32
MLPV-IW0049	38 to 48	8.11	N.		NI		N		N			M	N		5.90	2.21	6.25	1.86
MLPV-IW0050	40 to 50	7.15	N.		N		N		N			M	N		5.20	1.95	5.50	1.65
MLPV-IW0051	45 to 55	6.12	N.		NI		N		N			M	N		4.65	1.47	4.65	1.47
MLPV-IW0052	40 to 50	7.09	N.		NI		N		N			M	N		4.69	2.40	5.38	1.71
MLPV-IW0054	40 to 50	6.96	N.		NI		N		N			M	N		4.98	1.98	5.35	1.61
MLPV-IW0055	40 to 50	7.60	N.		NI		N		N			M	N		4.75	2.85	5.84	1.76
MLPV-SAMW0001	43 to 48	6.80	N.		NI		N		N			M	N		N		3.48	3.32
MLPV-SAMW0003	43 to 48	6.80	N	M	NI		N		N			M	N		N		4.03	2.77
VABU-IW0006D	42 to 47	6.29	4.48	1.81	5.52	0.77	5.82	0.47	3.88	2.41	5.11	1.18	4.59	1.70	4.47	1.82	4.84	1.45
PRES-IW0002D	42 to 47	5.11	4.13	0.98	5	0.11	5.55	-0.44	3.92	1.19		M	4.36	0.75	4.15	0.96	N	
PRES-IW0007D	42 to 47	4.63	3.53	1.10	4.38	0.25	4.90	-0.27	3.34	1.29	3.97	0.66	3.74	0.89	3.60	1.03	3.84	0.79
PRES-IW0009	40 to 50	5.17	N.		NI		N		N		N		N		3.70	1.47	3.97	1.20
PRES-IW0010	40 to 50	2.26	N		NI		N		N			M	N		1.16	1.10	1.3	0.96
SATV-IW0003D	40 to 45	7.10	5.15	1.95	6.13	0.97	6.45	0.65	4.60	2.50	5.90	1.20	5.22	1.88	4.47	2.63	5.51	1.59

- Notes:
 1. ft = feet.
 2. BLS = Below Land Surface.
 3. TOC = Top of Casing.
 4. NAVD88 = North American Vertical Datum 1988.
 5. BTOC = Below Top of Casing.
 6. NM = Not Measured.

- 7. * = collected outside the 24 hour period as construction in the VAB impeded access.

Table 7-2. VAB Area Groundwater Quality Parameters

Well ID	Screened Interval (ft BLS)	Date	Temperature (°C)	pH (S.U.)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	Total Dissolved Solids (g/L)	Turbidity (NTU)	Color
MLPV-SAMW0001	43 to 48	5/24/16	26.62	6.06	9.09	0.12	-177.30	5.904	16.4	clear
MLPV-SAMW0003	42 to 48	5/24/16	26.89	6.83	6.64	0.08	-212.9	4.311	9.04	clear

- 1. ft BLS = feet below land surface.
- 2. °C = degrees Celsius.
- 3. S.U. = Standard Units.
- 4. mS/cm = milliSiemens per centimeter.
- 5. mg/L = milligram per liter.
- 6. mV = millivolts.
- 7. g/L = gram per liter.
- 8. NTU = Nephelometric Turbidity Units.

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Table 7-3. VAB Area Summary of Historical Groundwater Data

_		Well ID:						MI	LPV-IW0000	SIR					
Scre	eened Interv	al (ft BLS):							28 to 33						
	Sa	imple Date:	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	GCTL	NADC													
VOCs (µg/L)															
Trichloroethene	3	300	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U,J	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.28 U	2.8	0.2 U	1.5	0.67 I	0.083 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U,J	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.20 U	0.48 I	0.45 U	0.45 U	0.13 U	0.39 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U,J	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.13U	0.16 U	0.16 U	0.16 U,J	0.50 U	0.50 U
Vinyl Chloride	1	100	9.5	32.1	8.9	23.3	9.8	4.1	3.2	4.7	2.0	1.1	0.76 I	0.99 I	0.50 U

Scr	eened Interv	Well ID: al (ft BLS):								IW0009I o 33						
	Sa	imple Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screening Crit GCTL NA															
	GCTL	NADC														
VOCs (µg/L)																
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	NS	0.16 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.60 I	0.71 I	0.2 U	0.27 I	0.2 U	0.12 U	0.083 U	NS	0.4 I	NS	0.41 I	0.36 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.59 I	0.48 I	0.45 U	0.45 U	0.45 U	0.13 U	0.39 U	NS	0.22 I	NS	0.16 I	0.12 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	NS	0.13 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl Chloride	1	100	4.8	5.0	4.4	3	2.8	2.3	1.8	NS	2.3	NS	1.7	1.6	2.1	0.50 U

		Well ID:							MLPV-I	W0009D						
Scr	eened Interv	al (ft BLS):							45 t	o 50						
	Sa	ample Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screening Crite GCTL NA															
	GCTL	NADC													1	
VOCs (µg/L)																
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.50 U	0.50 U				
cis-1,2-Dichloroethene	70	700	5.2	13.3	4.6	1.7	2.4	1.8	0.86 I	0.93 I	0.71 U	11	1.0	1.6	0.77 I	0.50 U
trans-1,2-Dichloroethene	100	1000	0.50 U	0.20 U	0.45 U	0.45 U	0.45 U	0.13 U	0.39 U	0.12 U	0.12 I	0.12 U	0.12 U	0.12 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.13 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl Chloride	1	100	36.4	199	56.2	115	46.9	35	35	9.4	11	260	15	21	10	0.50 U

Scr	eened Interv	Well ID: al (ft BLS):							MLPV-I 35 to							
		mple Date:		Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screenin	g Criteria														
	GCTL	NADC														
VOCs (µg/L)																
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	NS	0.16 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.57 I	0.47 I	0.72 I	0.38 I	0.62 I	0.12 U	0.32 I	NS	0.43 I	NS	0.43 I	0.36 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.50 U	0.20 U	0.45 U	0.45 U	0.45 U	0.13 U	0.39 U	NS	0.17 I	NS	0.12 U	0.12 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	NS	0.13 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl Chloride	1	100	7.3	9.1	11.1	10.4	12.3	7.3	4.9	NS	5	NS	2.6	0.22 U	0.50 U	0.50 U

- 1. ft BLS = feet Below Land Surface.
- GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
 NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
- 4. μg/L = micrograms per liter.
 5. U = Undetected.

- 6. J = estimated value below the reporting limit.
- 7. I = analyte detected below quantitation limits. 8. NS = Not Sampled.
- 9. Yellow shaded, bold text indicates exceedance of GCTL.
- 10. Orange shaded, bold text indicates exceedance of GCTL and NADC.

Table 7-3. VAB Area Summary of Historical Groundwater Data

Scr	eened Interv	Well ID: al (ft BLS):								W0012D o 50						
		imple Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screening Crite GCTL NAI															
	GCTL	NADC														
VOCs (µg/L)																
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.50 U	1.0	0.2 U	0.2 U	0.2 U	0.12 U	0.91 I	0.36 U	0.36 U	1.4	0.36 U	0.53 I	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	0.50 U	0.20 U	0.45 U	0.45 U	0.45 U	0.13 U	0.39 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.13 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl Chloride	1	100	9.0	86.2	13.3	53.7	14.5	12	38	8.8	6.4	53	8.6	14	8.5	0.50 U

Scr	eened Interv	Well ID: ral (ft BLS):								W0018D o 55						
	Sa	ample Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screening Crit GCTL NA															
	GCTL	NADC														
VOCs (µg/L)																
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U,J	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.53 I	5.1	1.1	2.6	0.85 I	0.66 I	1.4	0.78 I	0.78 I	4.6	0.93 I	1.7 J	0.76 I	0.50 U
trans-1,2-Dichloroethene	100	1000	0.50 U	0.20 U	0.45 U	0.45 U	0.45 U	0.13 U	0.39 U	0.12 U	0.12 U	0.41 I	0.12 U	0.13 I	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.13 U	0.16 U	0.16 U	0.16 U,J	0.50 U	0.50 U
Vinyl Chloride	1	100	0.50 U	7.4	0.71 I	4.6	0.92 I	0.82 I	2.6	0.74 I	0.64 I	32	4.8	12 J	2.5	0.50 U

		XV 11 ID	Ī						MIDM	111/00201						Í
		Well ID:								IW0028I						
Ser	eened Interv	al (ft BLS):							28 t	o 33						
	Sa	ample Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screening Crite GCTL NA															
	GCTL	NADC														
VOCs (µg/L)																
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	NS	0.16 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	2.0	0.28 U	2.9	1.3	1.5	0.39 I	0.45 I	NS	0.36 U	NS	0.36 U	0.36 U	0.50 U	0.50 U
trans-1,2-Dichloroethene	100	1000	1.0	0.20 U	0.84 I	0.77 I	0.79 I	0.13 U	0.39 U	NS	0.32 I	NS	0.25 I	0.19 I	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	NS	0.13 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl Chloride	1	100	18.9	24.1	28.8	25.6	22	16	16	NS	14	NS	11	9.0	10	4

		Well ID:							MLPV-I	W0029D						
Scr	eened Interv	al (ft BLS):							42 t	o 47						
	Sa	ample Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screening Criter GCTL NAI															
	GCTL	NADC														
VOCs (µg/L)																
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	NS	0.16 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.69 I	0.53 I	0.2 U	1	0.86 I	0.61 I	0.083 U	NS	1.1	NS	1.2	0.36 U	0.77 I	0.50 U
trans-1,2-Dichloroethene	100	1000	0.50 U	0.36 I	0.45 U	0.53 I	0.45 U	0.13 U	0.39 U	NS	0.37 I	NS	0.32 I	0.12 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	NS	0.13 U	NS	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl Chloride	1	100	34.2	38.2	59.4	54.8	55.1	43	33	NS	51	NS	42	33	43	27

- 1. ft BLS = feet Below Land Surface.
- 2. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
 3. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
- 4. μg/L = micrograms per liter.
 5. U = Undetected.

- 6. J = estimated value below the reporting limit.
- 7. I = analyte detected below quantitation limits. 8. NS = Not Sampled.
- 9. Yellow shaded, bold text indicates exceedance of GCTL.
- 10. Orange shaded, bold text indicates exceedance of GCTL and NADC.

Table 7-3. VAB Area Summary of Historical Groundwater Data

		Well ID:	MLPV-	IW0046	MLPV-	IW0047	MLPV-	IW0048	MLPV-	IW0049	MLPV-IW0050		MLPV-IW0051		MLPV-IW0052		MLPV-IW0053		MLPV-IW0054		MLPV-	IW0055
Screened Interval (ft BLS):		35 to 45		35 to 45		40 to 50		38 to 48		40 to 50		45 to 55		40 to 50		35 to 45		40 to 50		40 to 50		
Sample Date:		Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16	
Screening Criteria		ng Criteria																				
	GCTL	NADC																				
VOCs (µg/L)																						
Trichloroethene	3	300	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U						
cis-1,2-Dichloroethene	70	700	0.50 U	0.50 U	0.56 I	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.64 I	0.50 U	0.50 U	0.50 U	1.8	0.50 U	4.6	4	0.50 U	0.50 U	0.57 I	0.50 U
trans-1,2-Dichloroethene	100	1000	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.60 I	0.50 U	0.50 U	0.50 U	0.50 U						
1,1-Dichloroethene	7	700	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U						
Vinyl Chloride	1	100	1.8	8.1	4.2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	81	79	130	52	1.1	0.50 U	1.1	0.50 U

		Well ID:		IW0056	MLPV-SAMW0001	MLPV-SAMW0003
Sere	eened Interv	al (ft BLS):	30 t	o 40	43 to 48	43 to 48
	Sa	imple Date:	Nov-14	May-16	May-16	May-16
	Screen	ning Criteria				
	GCTL	NADC				
VOCs (µg/L)						
Trichloroethene	3	300	0.50 U	0.50 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.50 U	0.50 U	0.50 U	86
trans-1,2-Dichloroethene	100	1000	0.50 U	0.50 U	0.50 U	3.9
1,1-Dichloroethene	7	700	0.50 U	0.50 U	0.50 U	0.50 U
Vinyl Chloride	1	100	0.50 U	0.50 U	0.50 U	80

		Well ID:		PCCA-MW0004													
Scr	eened Interv	al (ft BLS):						5 to	o 15								
	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16					
	Screen	ning Criteria															
	GCTL	NADC															
VOCs (µg/L)																	
Trichloroethene	3	300	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.50 U	0.50 U							
cis-1,2-Dichloroethene	70	700	1.6	1.4	0.37 I	1.1	0.49 I	1.1	0.85 I	0.93 I	1.1	0.36 U	0.72 I	0.50 U			
trans-1,2-Dichloroethene	100	1000	0.45 U	0.45 U	0.45 U	0.13 U	0.39 U	0.12 U	0.12 U	0.12 U	0.21 I	0.12 U	0.50 U	0.50 U			
1,1-Dichloroethene	7	700	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.13 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U			
Vinyl Chloride	1	100	0.88 I	2.9	1.4	1.8	1.1	1.5	1.1	2.1	1.4	0.22 U	0.50 U	0.50 U			

		Well ID:						PCCA-N	MW0017					
Ser	eened Interv	al (ft BLS):						15 t	o 25					
	Sa	imple Date:	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16
	Screenin	g Criteria												
	GCTL	NADC												
VOCs (µg/L)														
Trichloroethene	3	300	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	70	700	0.56 I	0.74 I	0.2 U	0.12 U	0.083 U	0.36 U	0.50 U	0.50 U				
trans-1,2-Dichloroethene	100	1000	0.54 I	0.64 I	0.45 U	0.13 U	0.39 U	0.43 I	0.45 I	0.72 I	0.17 I	0.12 U	0.50 U	0.50 U
1,1-Dichloroethene	7	700	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	0.16 U	0.13 U	0.16 U	0.16 U	0.16 U	0.50 U	0.50 U
Vinyl Chloride	2.2	3.7	0.58 I	3.7	0.16 U	2.7	2.9	5.1	1.9	1.6	0.50 U	0.50 U		

- 1. ft BLS = feet Below Land Surface.
- 2. GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 3. NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC)
- 4. μ g/L = micrograms per liter.
- 5. U = Undetected.

- 6. J = estimated value below the reporting limit.
- 7. I = analyte detected below quantitation limits. 8. NS = Not Sampled.
- 9. Yellow shaded, bold text indicates exceedance of GCTL.
- 10. Orange shaded, bold text indicates exceedance of GCTL and NADC.

Table 7-3. VAB Area Summary of Historical Groundwater Data

Serv	eened Interv	Well ID:		PRES-IW0007I 32 to 37													PRES-IW0009 40 to 50		PRES-1 40 t	W0010 o 50
		ample Date:	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16	Nov-14	May-16	Nov-14	May-16
	Screenin	g Criteria																		
	GCTL	NADC																		
VOCs (µg/L)																				
Trichloroethene	3	300	0.50 U	0.38 U	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	NS	0.16 U	NS	0.16 U	0.16 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	700	25.0	12.4	13.8	5.8	7.6	5.9	4.5	NS	3.4	NS	1.1	1.1	0.50 U	0.50 U	4.3	0.5 U	0.5 U	0.5 U
trans-1,2-Dichloroethene	100	1000	0.79 I	0.20 U	0.87 I	0.79 I	0.67 I	0.13 U	0.61 I	NS	0.49 I	NS	0.36 I	0.42 I	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	NS	0.13 U	NS	0.16 U	0.16 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	1	100	8.1	0.34 U	10.8	9.3	11.8	7.8	6	NS	5.4	NS	1.9	2.4	0.93 I	0.50 U	2.9	0.5 U	0.5 U	0.5 U

Ser	eened Interv	Well ID:	SATV-IW0009I 22 to 27														SATV-IW0010 35 to 45	
Sei	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16	Nov-14	May-16		
	Sample Date: Screening Criteria																	
	GCTL	NADC																
VOCs (µg/L)																		
Trichloroethene	3	300	2.7	2.4	0.82 I	1.6	0.32 U	0.63 I	0.92 I	NS	0.61 I	NS	0.98 I	1.2	0.5 U	0.5 U	1.4	0.5 U
cis-1,2-Dichloroethene	70	700	18.2	35.9	10.1	24.6	1.9	11	12	NS	6	NS	16	34	1.2	2.7	16	0.5 U
trans-1,2-Dichloroethene	100	1000	8.2	28.4	32.3	29.3	16.8	25	23	NS	17	NS	19	31	1.9	2.7	12	0.5 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	NS	0.13 U	NS	0.26 I	0.45 I	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	1	100	0.50 U	18.9	40.7	31.9	26.6	24	0.16 U	NS	16	NS	10	15	0.5 U	0.5 U	0.5 U	0.5 U

		Well ID:							WCPS-IV	W0001SR							WCPS-	IW0016
Scr	eened Interva	al (ft BLS):							2.5 to	12.5							15 t	o 25
	May-07	Nov-07	May-08	Nov-08	May-09	Nov-09	May-10	Nov-10	May-11	Nov-11	Nov-12	May-13	Nov-14	May-16	Nov-14	May-16		
	GCTL	NADC																
VOCs (µg/L)	VOCs (µg/L)																	
Trichloroethene	3	300	0.50 U	0.40 I	0.32 U	0.32 U	0.32 U	0.15 U	0.12 U	NS	0.16 U	NS	0.16 U	0.16 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	70	700	62.7	45.8	65.1	40.9	63.3	55	28	NS	36	NS	46	15	7.9	9	1.8	6
trans-1,2-Dichloroethene	100	1000	3.0	2.2	4.2	2.3	3.3	3.2	1.8	NS	2.1	NS	2.5	0.63 I	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	7	700	0.50 U	0.23 U	0.54 U	0.54 U	0.54 U	0.16 U	0.41 U	NS	0.16 U	NS	0.16 U	0.16 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	1	100	14.5	12.2	24.5	16.3	25.7	19	10	NS	21	NS	20	3.3	20	28	1.9	0.5 U

- 1. ft BLS = feet Below Land Surface.
- GCTL = Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
 NADC = Natural Attenuation Default Concentrations (Chapter 62-777, FAC).
- 4. μg/L = micrograms per liter.
 5. U = Undetected.

- 6. J = estimated value below the reporting limit.
 7. I = analyte detected below quantitation limits.
 8. NS = Not Sampled.
- 9. Yellow shaded, bold text indicates exceedance of GCTL.
- 10. Orange shaded, bold text indicates exceedance of GCTL and NADC.

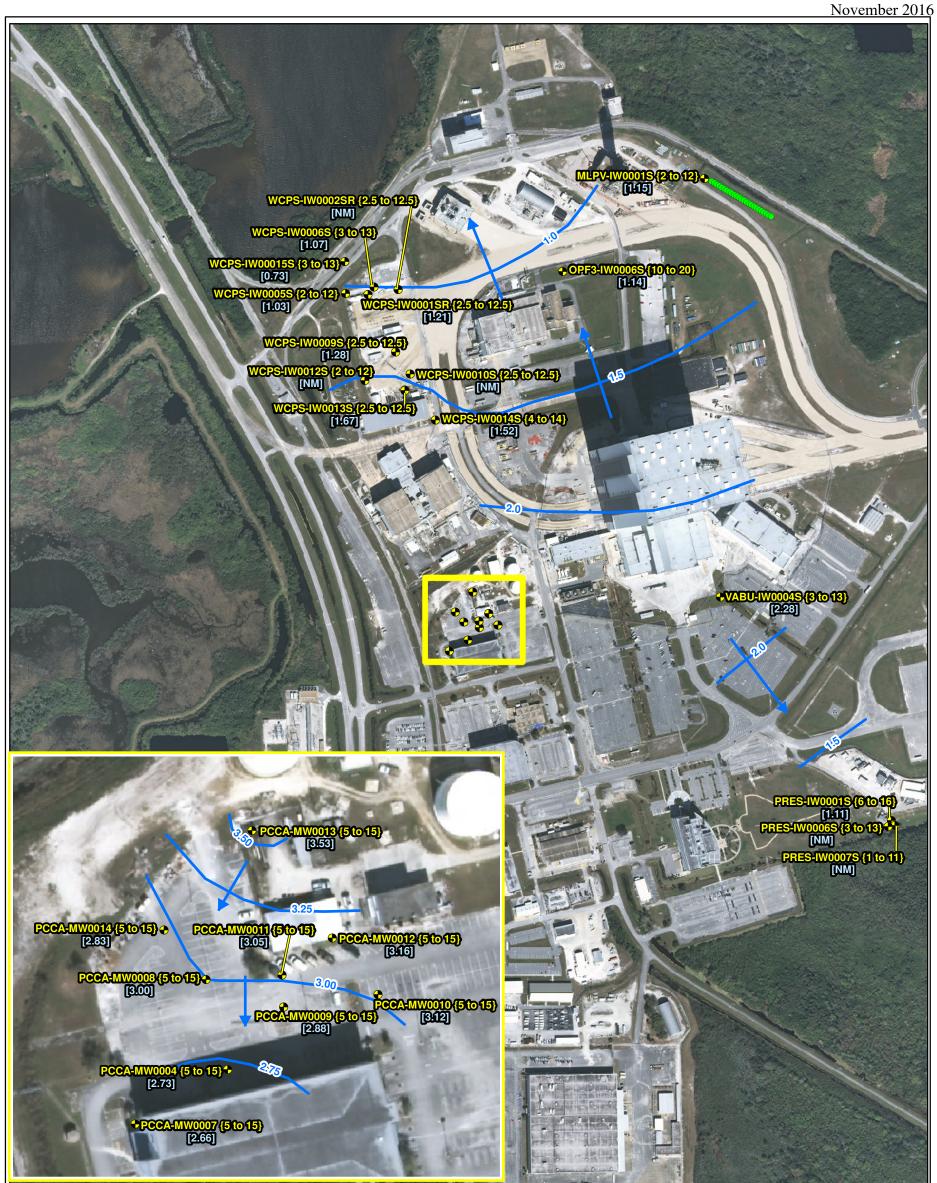


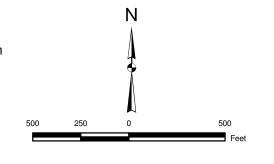
Figure 7-1 VAB Area Shallow Zone Potentiometric Surface Map – May 2016

Legend

- **Shallow Monitoring Well Location** {screen interval} and [groundwater elevation]
- Biosparge Well Location

Equipotential Line Generalized Groundwater Flow Direction

- Screen interval is presented in feet, below land surface (ft, BLS).
 Groundwater elevation is presented in ft, NAVD88.
 * indicates elevation was not used for contouring.
- 4. NM indicates not measured.



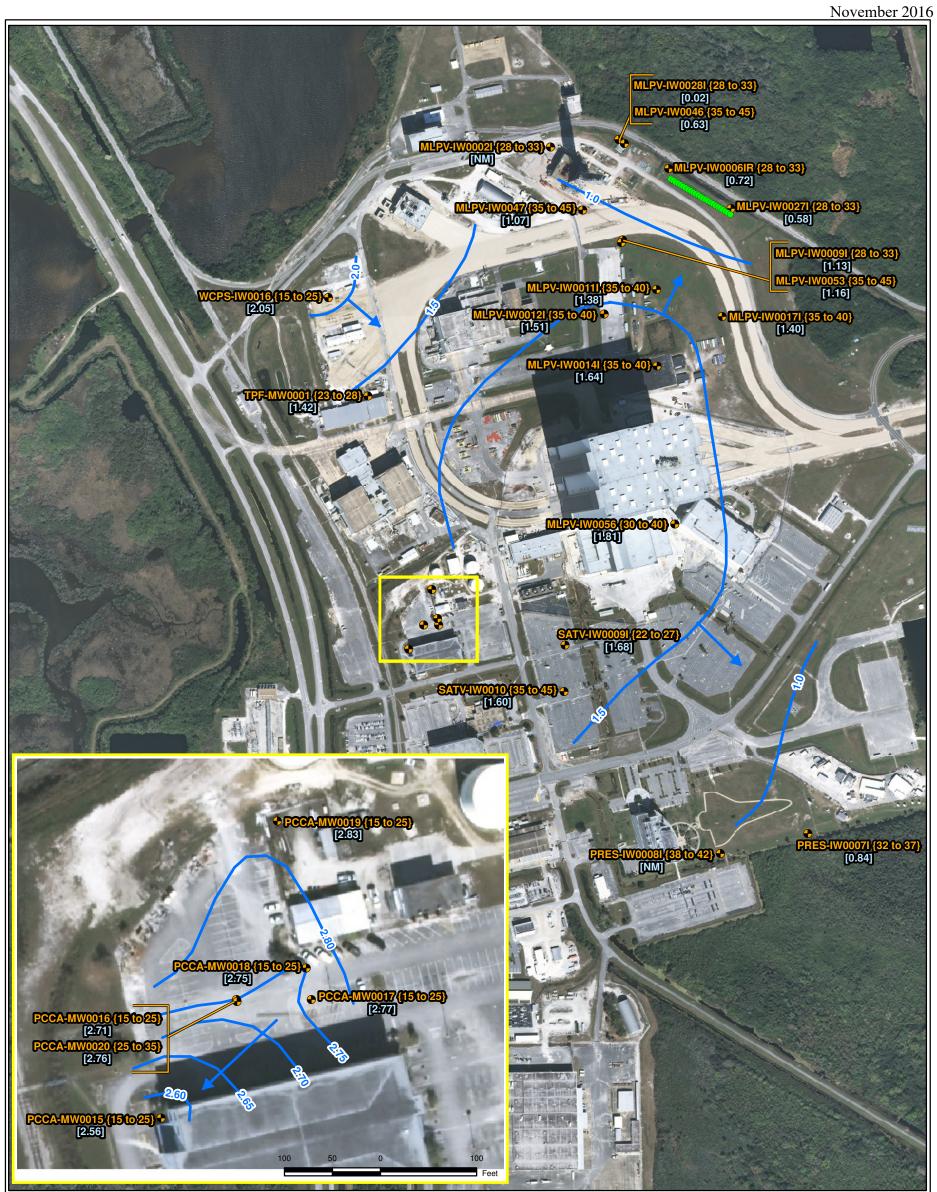


Figure 7-2 VAB Area Intermediate Zone Potentiometric Surface Map - May 2016

Legend ● Intermediate Monitoring Well Location {screen interval} and [groundwater elevation] → Generalized Groundwater Flow Direction Notes: 1. Screen interval is presented in feet, below land surface (ft, BLS). 2. Groundwater elevation is presented in ft, NAVD88. 3. NM indicates not measured.



Figure 7-3 VAB Area Deep Zone Potentiometric Surface Map - May 2016

Legend

- Deep Monitoring Well Location {screen interval} and [groundwater elevation]
- Biosparge Well Location
- Inferred Equipotential Line
- Equipotential Line
- Generalized Groundwater Flow Direction

- Screen interval is presented in feet, below land surface (ft, BLS).
 Groundwater elevation is presented in ft, NAVD88.
- 3. * indicates not used for contouring.
- 4. NM indicates not measured.

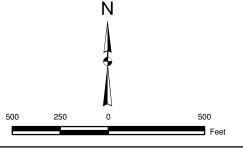


Figure 7-4. VAB Area Hydrographs and Trend Plots of Vinyl Chloride in Shallow Wells

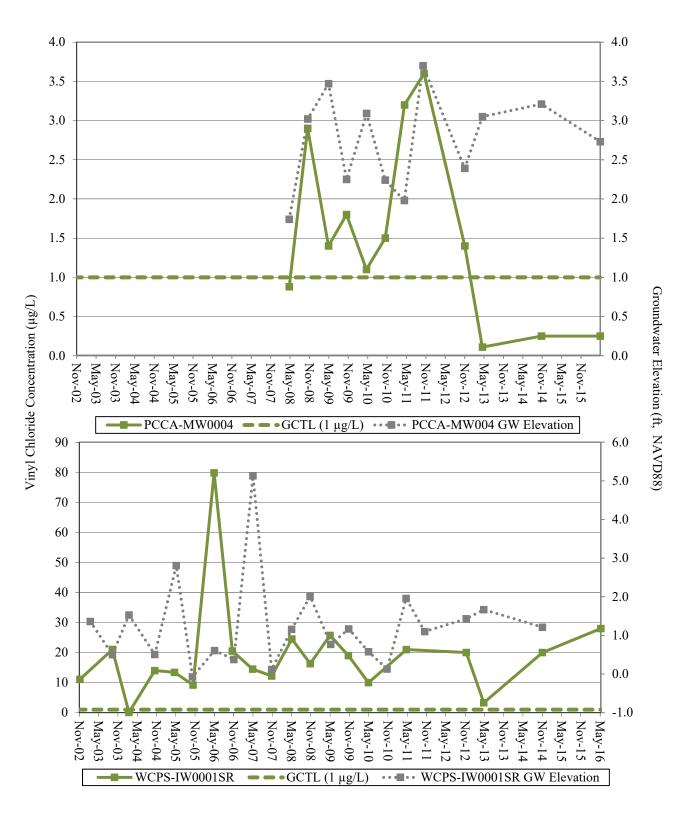


Figure 7-5. VAB Area Hydrographs and Trend Plots of Vinyl Chloride in Intermediate Wells Upgradient of the Biosparge Wall

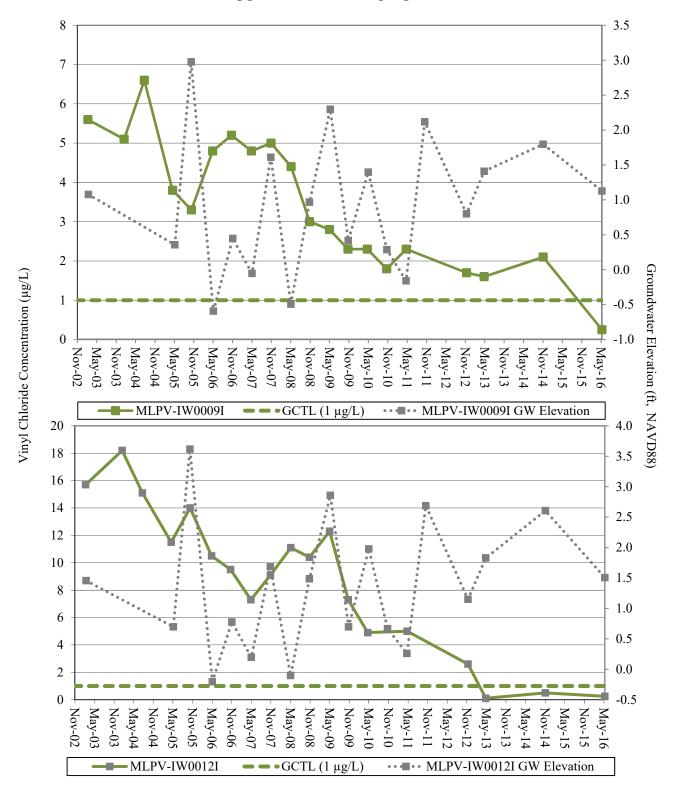


Figure 7-6. VAB Area Hydrographs and Trend Plots of Vinyl Chloride in Intermediate Wells

Downgradient of the Biosparge Wall

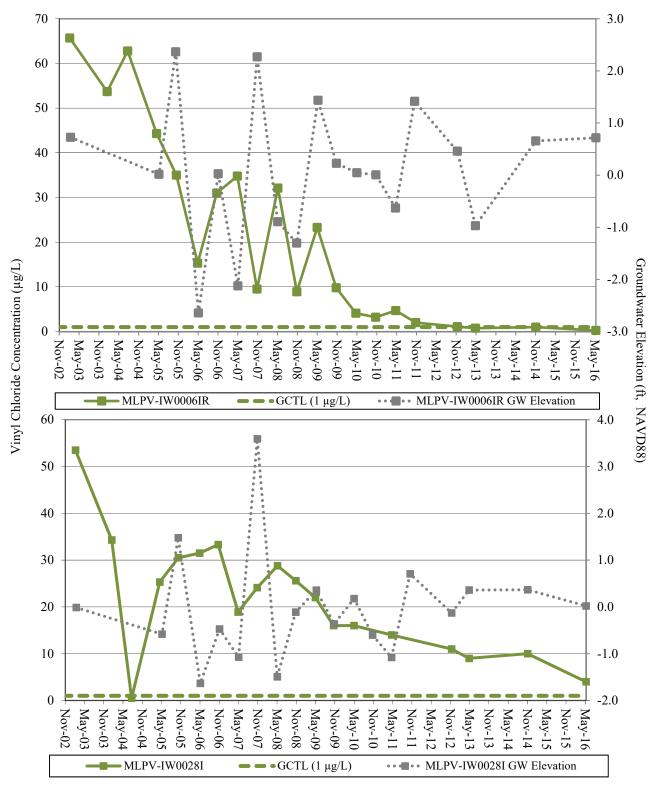


Figure 7-7. VAB Area Hydrographs and Trend Plots of Vinyl Chloride in Intermediate Wells in the PCCA and SATV Areas

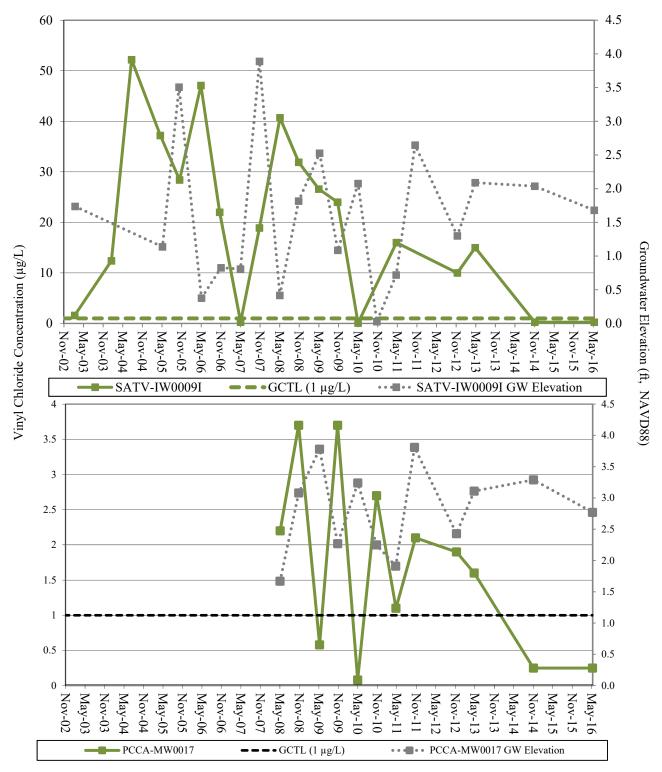


Figure 7-8. VAB Area Hydrographs and Trend Plots of Vinyl Chloride in Intermediate Wells in the PRES Area

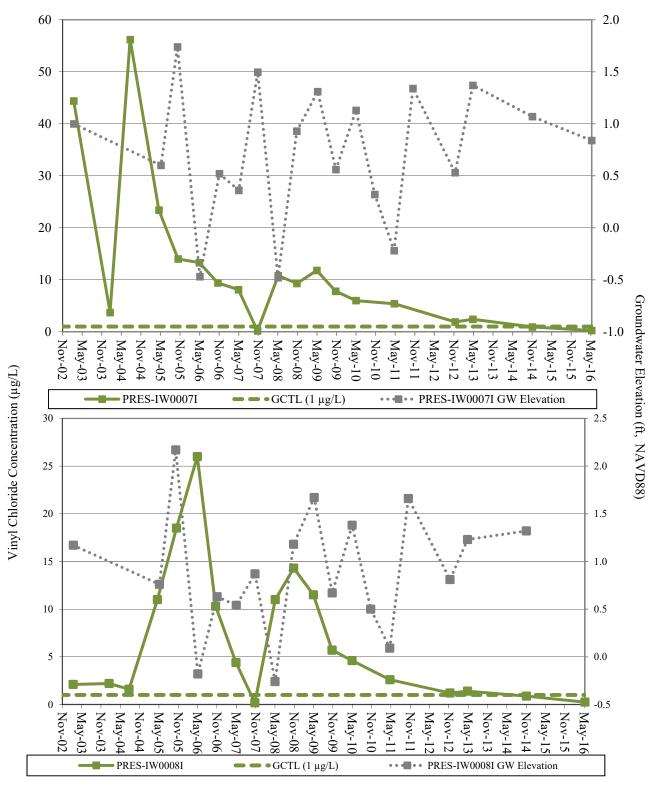


Figure 7-9. VAB Area Hydrographs and Trend Plots of Vinyl Chloride in Deep Wells

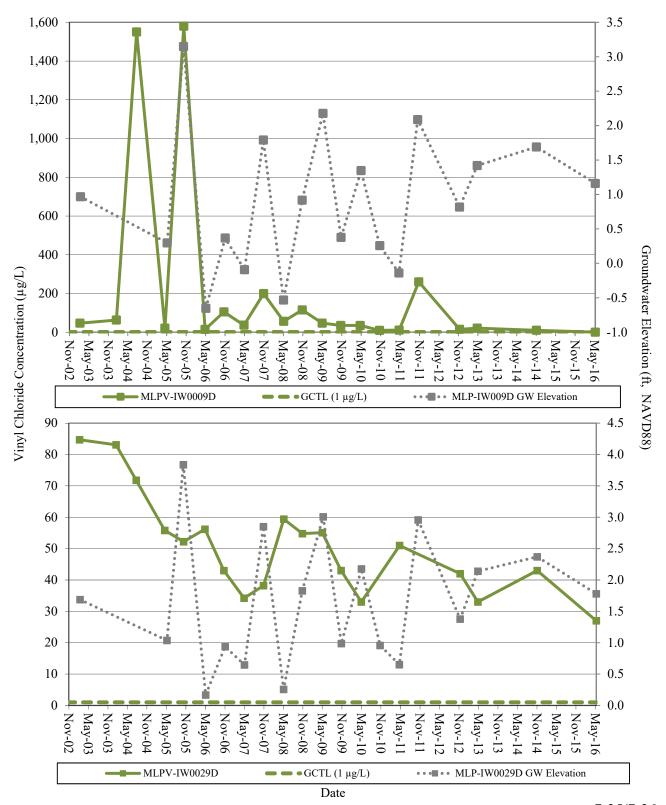
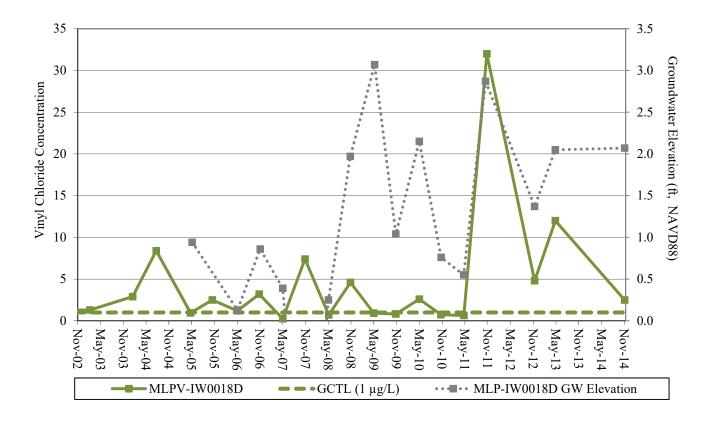


Figure 7-9. VAB Area Hydrographs and Trend Plots of Vinyl Chloride in Deep Wells



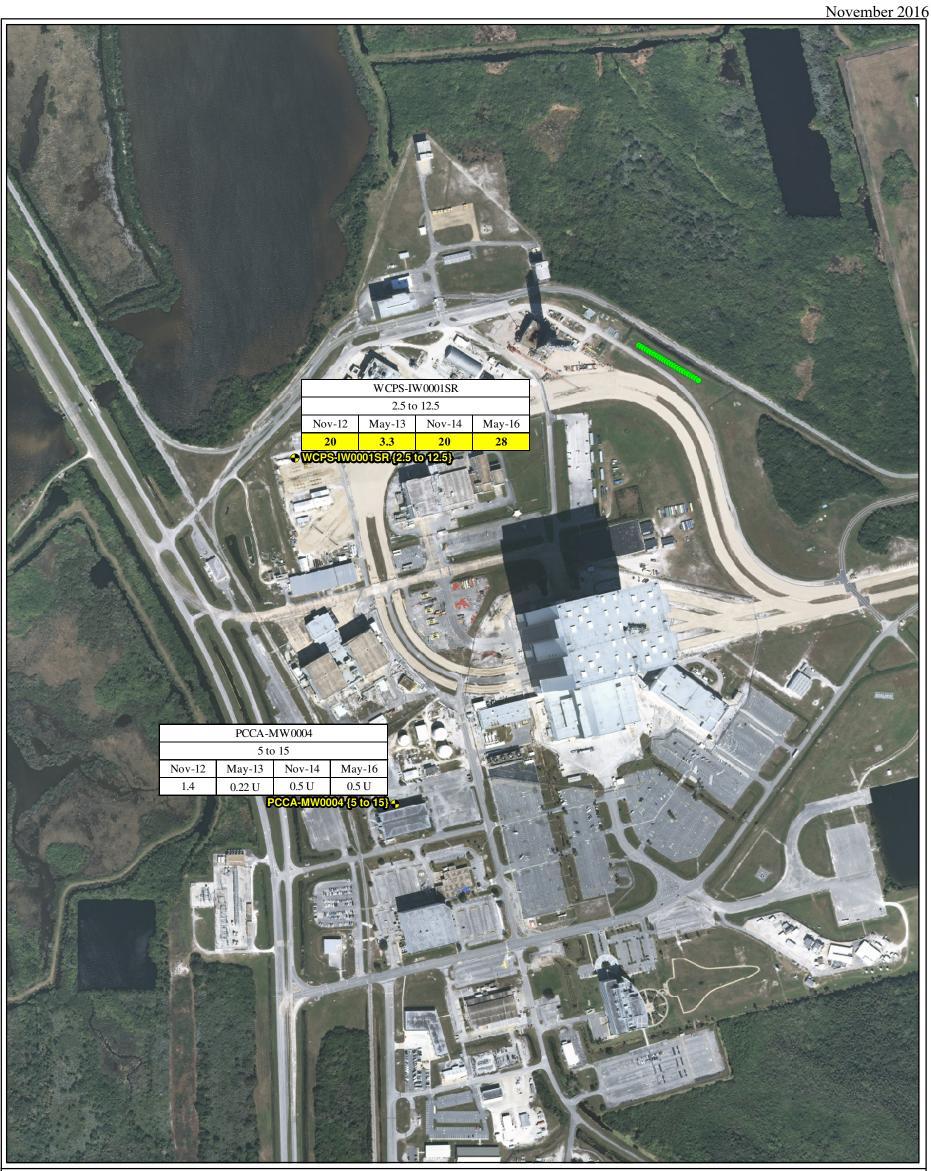


Figure 7-10 VAB Area Summary of Vinyl Chloride Results in Shallow Groundwater

Legend

- Shallow Monitoring Well Location {screen interval}
- Biosparge Well Location

Screenin	g Criter	ia
Parameter	GCTL	NADC
Vinyl Chloride	1	100

- Notes:
 1. Screen interval is presented in feet, below land surface (ft, BLS).
- 2. Results presented in $\mu g/L$. 3. I indicates analyte detected below quantitation limits.
- 4. NS indicates not sampled.
- NS Indicates not sampled.
 GCTL indicates Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
 NADC indicates Natural Attenuation Default Concentration (Chapter 62-777, FAC).
 Yellow shaded, bold text indicates exceedance of GCTL.

- 8. U indicates undetected.

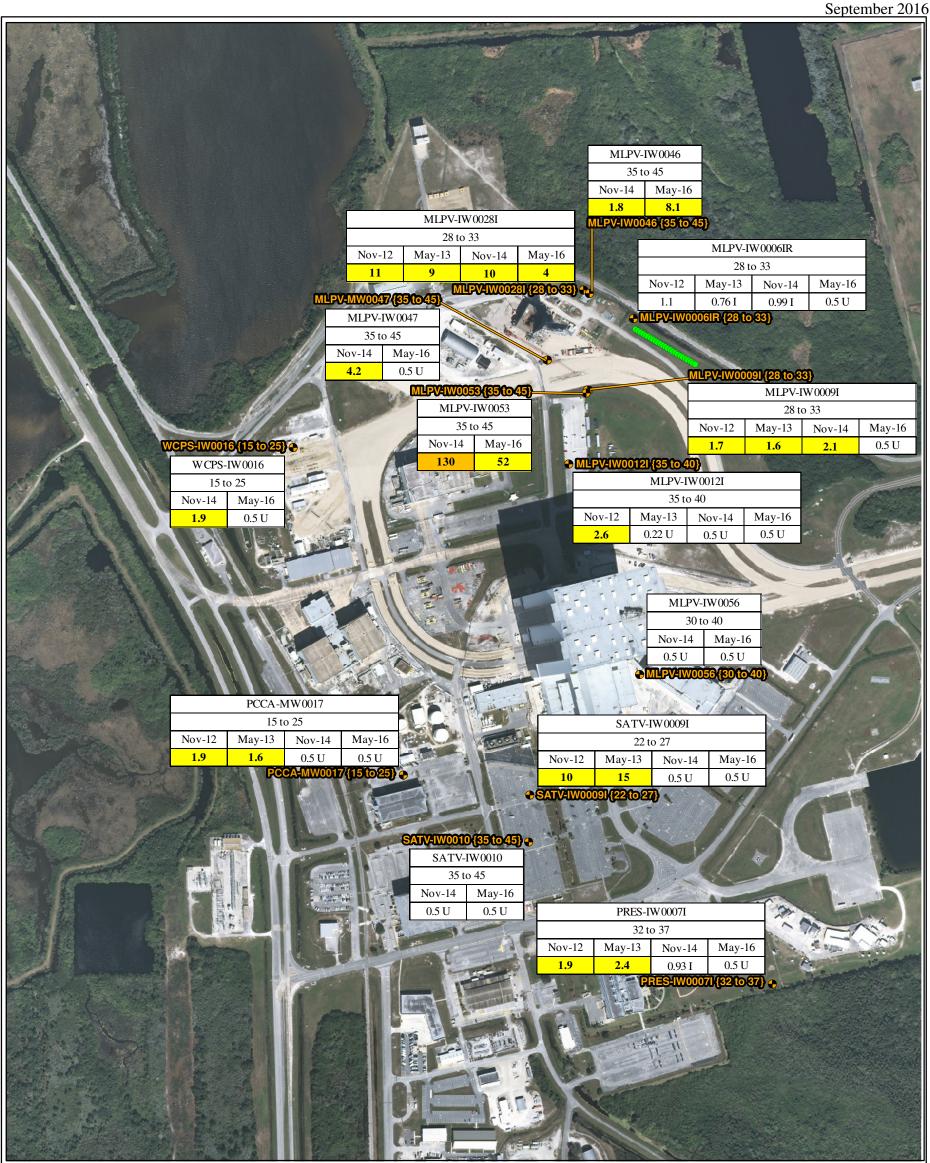
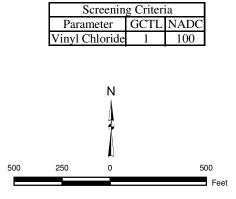


Figure 7-11 VAB Area Summary of Vinyl Chloride Results in Intermediate Groundwater

Legend

- Intermediate Monitoring Well Location {screen interval}
- Biosparge Well Location

- 1. Screen interval is presented in feet, below land surface (ft, BLS).
- 2. Results are presented in µg/L.
- 3. I indicates analyte detected below quantitation limits.
- 4. U indicates undetected.
- 5. GCTL indicates Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 6. NADC indicates Natural Attenuation Default Concentration (Chapter 62-777, FAC).
 7. Yellow shaded, bold text indicates exceedance of GCTL.



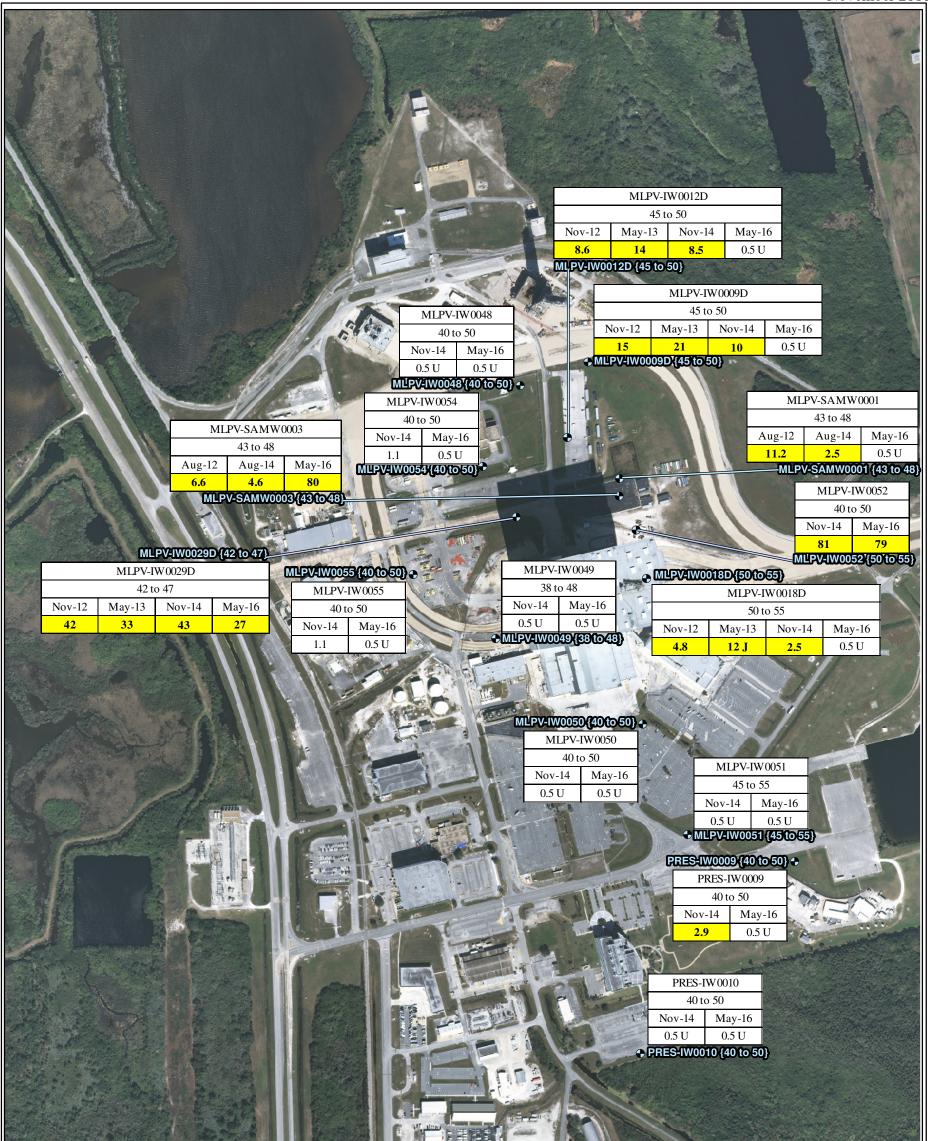


Figure 7-12 VAB Area Summary of Vinyl Chloride Results in Deep Groundwater

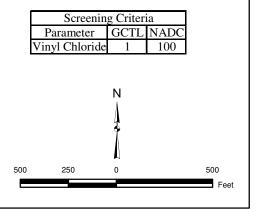
Legend

Deep Monitoring Well Location {screen interval}

Notes:

- 1. Screen interval is presented in feet, below land surface (ft, BLS).
- 2. Results are presented in $\mu g/L$.
- 3. U indicates undetected.
- 4. J indicates estimated value.
- 5. GCTL indicates Groundwater Cleanup Target Levels (Chapter 62-777, FAC).
- 6. NADC indicates Natural Attenuation Default Concentration (Chapter 62-777, FAC).

 7. Yellow shaded, bold text indicates exceedance
- of GCTL.
- 8. Orange shaded, bold text indicates exceedance of GCTL and NADC.
- 9. Previous data reported in the MLPV/VAB Area Corrective Measures Implementation and Interim Measures Annual Report, November 2015.



SECTION VIII

RECOMMENDATIONS AND CONCLUSIONS

8.1 FS6 RECOMMENDATIONS

The following recommendations are made in the FS6 Area based on the May 2016 sampling event:

- Conduct sampling in November 2016 (end of wet season) in two wells for VOCs using low-flow sampling techniques.
- If VC results from the November sampling event are less than GCTL, propose No Further Action (NFA) for FS6 groundwater.
- If VC results from the November sampling event are greater than GCTL, resume biennial sampling with alternating seasons.

8.2 FDTL RECOMMENDATIONS

The following recommendations are made in the FDTL Area based on the May 2016 sampling event:

• Discontinue sampling at FDTL-IW13I because concentrations of TCE and VC have been below detection limits for three or more consecutive sampling events.

Continue sampling seven wells for VOCs using PDBs on a biennial basis with alternating seasons (next event in Fall 2018).

8.3 C5ES RECOMMENDATIONS

The following recommendations are made in the C5ES Area based on the May 2016 sampling event:

- Discontinue sampling C5ES-MW10I, C5ES-MW12S, and C5ES-MW12I because concentrations of VC have been below GCTL for at least two consecutive sampling events.
- Continue sampling three wells for VOCs using PDBs on a biennial basis with alternating

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seasons (next event in Fall 2018).

8.4 SFOC AREA RECOMMENDATIONS

The following recommendations are made in the Shuttle Flight Operations Contract Generator Maintenance Facility (SFOC) Area based on the May 2016 sampling event:

• Continue sampling SFOC-IW1S and SFOC-IW4S for antimony on a biennial basis with alternating seasons (next event in Fall 2018). Prior to next sampling event, install a new monitoring well located adjacent to SFOC-IW1S (screened from 6 to 16 feet below land surface with 0.006-inch slot screen and fine sand filter pack) and sample on a biennial basis to evaluate if the results are more representative of the surficial aquifer conditions.

8.5 VAB AREA RECOMMENDATIONS

The following recommendations are made in the VAB Area based on the May 2016 sampling event.

- Discontinue sampling at one shallow well (PCCA-MW004), seven intermediate wells
 (MLPV-IW0006IR, MLPV-IW0012I, MLPV-IW0056, SATV-IW0009I, SATV-IW0010,
 PCCA-MW0017, and PRES-IW0007I), and seven deep wells (MLPV-IW0048, MLPV-IW0049, MLPV-IW0050, MLPV-IW0051, MLPV-IW0054, MLPV-IW0055, and PRES-IW0010) because concentrations of VC have been below GCTL for at least two consecutive sampling events.
- Continue sampling at 13 wells for VOCs using PDBs and two wells for VOCs using low flow purging techniques on a biennial basis with alternating seasons (next event in Fall 2018).
- Add two intermediate wells (SATV-IW0004I and VABU-IW0001I) and two deep wells (MLPV-IW0020D and VAB-IW0005D) to the VAB LTM sampling plan (next event Fall 2018).

8.6 SUMMARY

Table 8-1 provides a summary of the wells to be sampled and the analyses to be performed in Fall 2018.

Table 8-1 Monitoring Wells to be Sampled for VAB Area LTM in 2018

Well ID	Area	Screened Interval (ft BLS)	Water Levels	Parameters to be Analyzed in Fall 2018		
FS6-MW0001	FG/	25 to 35	✓	VOCs*		
FS6-MW0003	FS6	20 to 30	✓	VOCs*		
FDTL-IW0015S		5 to 15	✓	VOCs		
FDTL-IW0007I		10 to 20	✓	VOCs		
FDTL-IW0008I		10 to 20	✓	VOCs		
FDTL-IW0009I	FDTL	10 to 20	✓	VOCs		
FDTL-IW0014I		10 to 20	✓	VOCs		
FDTL-IW0017I		10 to 20	√	VOCs		
FDTL-IW00171		10 to 20		VOCs		
C5ES-MW0017S		7 to 12	<u> </u>	VOCs		
C5ES-MW0017S	C5ES	7 to 12	<u> </u>	VOCs		
C5ES-MW00183	CJES	13 to 23	<u> </u>	VOCs		
SFOC-IW0001S		2 to 12	<u> </u>	Total Antimony		
SFOC-IW0004S	SFOC	2 to 12	<u> </u>	Total Antimony		
SFOC-IW0007S**	51 00	6 to 16	<u> </u>	Total Antimony		
MLPV-IW0009D		45 to 50	✓	VOCs		
MLPV-IW0009I		28 to 33	✓	VOCs		
MLPV-IW0012D		45 to 50	✓	VOCs		
MLPV-IW0018D		50 to 55	✓	VOCs		
MLPV-IW0020D		45 to 50	✓	VOCs		
MLPV-IW0028I		28 to 33	✓	VOCs		
MLPV-IW0029D		42 to 47	✓	VOCs		
MLPV-IW0046		35 to 45	✓	VOCs		
MLPV-IW0047		35 to 45	✓	VOCs		
MLPV-IW0052	VAB	40 to 50	✓	VOCs		
MLPV-IW0053		35 to 45	✓	VOCs		
MLPV-SAMW0001		43 to 48	✓	VOCs		
MLPV-SAMW0003		43 to 48	✓	VOCs		
PRES-IW0009		40 to 50	✓	VOCs		
SATV-IW0004I		25 to 30	√	VOCs		
VAB-IW0005D		52 to 57	√	VOCs		
VABU-IW0001I		20 to 30	√	VOCs		
WCPS-IW0001SR		2.5 to 12.5	✓	VOCs		
WCPS-IW0016		15 to 25	✓	VOCs		

Notes:

- 1. BLS = Below Land Surface.
- 2. ft = feet.
- 3. VOCs indicates volatile organic compounds collected using passive diffusion bags (PDBs).
- 4. "*" indicates Low-flow sampling of these wells will be conducted in November 2016.
- 5. "**" indicates monitoring well to be installed prior to Fall 2018 sampling event.
- 6. Grey shading indicates groundwater samples will be collected using low flow purging techniques.

SECTION IX

REFERENCES

Florida Department of Environmental Protection. 30 July 2014. Chapter 62-160, Florida Administrative Code, Quality Assurance, Standard Operating Procedures for Field Activities, DEP-SOP-001/01.

National Aeronautics and Space Administration. June 2011. Sampling and Analysis Plan for the RCRA Corrective Action Program at the John F. Kennedy Space Center, Florida (Revision 4), prepared by Geosyntec Consultants, NASA Document Number KSC-TA-6169.

National Aeronautics and Space Administration, November 2015. *Corrective Measures Implementation and Interim Measures Annual Report: Summary of Biosparge and Air Sparge System Operation and Maintenance and Interim Groundwater Monitoring, John F. Kennedy Space Center, Florida (Revision 0)*, prepared by Geosyntec Consultants, Titusville, Florida.

APPENDIX A

APPLICABLE REMEDIATION TEAM MEETING MINUTES

Revision 1 Meeting Minutes for September 1st and 2nd, 2016

Revision 1 Meeting Minutes for September 1st and 2nd, 2016.

Attendees:

John Armstrong/FDEP (phone) Rosaly Santos-Ebaugh/NASA Anne Chrest/NASA Dinh Vo/NASA Mike Deliz/NASA Natasha Darre/NASA Chris Adkison/Jacobs Deda Johansen/Jacobs Guy Fazzio/Jacobs Sarah Damphousse/CORE Melissa Hensley/Geosyntec

Jim Langenbach/Geosyntec

Rebecca Daprato/Geosyntec

Emily Lawson/Geosyntec Joseph Bartlett/Geosyntec Tom Peel/Geosyntec Alex Warzinski/Geosyntec Mike Burcham/Geosyntec Kevin Warren/Geosyntec Cathy Soistman/Geosyntec Ben Coppenger/Geosyntec Mark Speranza/Tetra Tech Chris Hook/Tetra Tech Chris Neuman/Tetra Tech Alex Murphy/Tetra Tech

1609-M13

Geosyntec

Jim Langenbach/ Vehicle Assembly Building (VAB) Area Long Term Monitoring (LTM) (SWMUs 40, 44, 56, 66, 72, 74, 75, 80, 81, 83, 101, 106, 107, and 108)

Goal: Obtain team consensus on path forward for each site.

Discussion: Fire Station No. 6 (FS6) (SWMU 106) was incorporated into VAB LTM program in 2014. The biennial event was conducted in May 2016. VC was not detected in either well sampled and concentrations decreased from 2013 to 2016. Recommendation to continue biennial monitoring. If next event (November 2016) has VC concentrations less than GCTLs, propose NFA for groundwater.

Team consensus reached to conduct sampling in November 2016 (end of wet season) at MW0001 and MW0003 for VOC analysis using low-flow sampling techniques.

Former Development and Testing Laboratory (FDTL) (SWMU 075) was incorporated into the VAB LTM program in 2016. The biennial event was conducted in May 2016. TCE and VC are the constituents of concern (COCs).

VC was greater than the GCTL in IW0015S (shallow well). TCE was greater than the GCTL in two of the seven interemediate wells sampled, with concentrations ranging from 4.2 to 5 µg/L. VC was greater than the GCTL in three of seven intermediate wells sampled, with concentrations ranging from 1.5 to 62 μ g/L. cDCE was detected in four of seven wells, all below the GCTL.

Team consensus reached to discontinue sampling of IW0013I as TCE and VC have not been detected for three or more consecutive sampling events.

Team consensus reached to continue sampling IW0007I, IW0014I, IW0008I, IW0009I, IW0015S, IW0017I, and IW0018I for VOCs using passive diffusion bags (PDB) on a biennial basis with alternating seasons (next event in Fall of 2018).

C-5 Electrical Substation (C5ES) (SWMU 66) biennial sampling event was conducted May 2016. The COC is VC in groundwater. One of the three wells sampled in the shallow zone had a VC exceedance (23 μg/L, MW0018S). One of the three wells sampled in the intermediate zone had a VC exceedance (29 μg/L, MW0019I). Based on the Mann-Kendall Statistical analysis for VC, five wells had decreasing trends and one well had a stable trend.

Team consensus reached to discontinue sampling of MW0010I, MW0012S, and MW0012I, as VC concentrations have been below GCTLs for at least two consecutive sampling events.

Team consensus reached to sample MW0017S, MW0018S, and MW0019I for VOCs using passive diffusion bags (PDBs) on a biennial basis with alternating seasons (next event in Fall of 2018), pending the implementation of the IM.

NASA anticipates that the IM for C5 will be funded in 2017 (currently no contract).

Shuttle Flight Operations Contract Generator Maintenance Facility Area (SFOC) (SWMU 81) biennial sampling event was conducted May 2016. The COC is antimony in groundwater. Antimony concentration in IW0001S is above the GCTL but below the NADC for the first time since May 2011. Antimony appears to be associated with soil in the smear zone and possibly not representative of aquifer conditions.

Team consensus reached to continue sampling SFOC-IW1S and SFOC-IW4S for antimony on a biennial basis, with alternating seasons (next event in Fall 2018).

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Team consensus reached to install a new monitoring well using a larger diameter borehole adjacent to SFOC-IW1S (screened from approximately 6 to 16 ft BLS with 0.006 inch slot screen and fine sand filter pack) and sample to evaluate if results are more representative of the surficial aquifer conditions.

Mobile Launch Platform/Vehicle Assembly Building Area biennial sampling event was conducted May 2016. The COC is VC in groundwater. One well of 2 sampled in the shallow zone had a GCTL exceedance of VC. In the intermediate zone, three of the fourteen wells sampled had exceedances of the GCTL for VC, with concentrations ranging from 4 to 52 μ g/L. Three of thirteen wells sampled in the deep zone had exceedances of the GCTL for VC, with concentrations ranging from 27 to 80 μ g/L. Result of the Mann-Kendall statistical analysis for VC indicate that of the fifteen wells sampled twelve wells exhibited decreasing trends and three wells had no trends. There were no wells sampled that exhibited increasing trends.

Team did not obtain consensus on the next LTM event for the VAB Area. Team discussed the potential need for installing wells that represent the current LCP boundary. Team plans to look at some of the wells that weren't used previously in the LTM that may now be on the fringe of the LCP, and determine an overall monitoring well network that is consistent with the current plume periphery. If there is a need to install additional wells, a recommendation will be made. A new set of proposed wells for monitoring this site will be a basket item for the October team meeting.

Results: Decision item 1906-D42 to D48

September 2	2016 Decision	n items Rev 1
Decision	Minutes	
No.	reference	Decision
		Fire Station No. 6 (FS6) (SWMU 106) - Team consensus reached to conduct sampling in November
1609-D42	1609-M13	2016 (end of wet season) at MW0001 and MW0003 for VOC analysis using low-flow sampling techniques.
		Former Development and Testing Laboratory (FDTL) (SWMU 075) - Team consensus reached to
1609-D43	1609-M13	discontinue sampling of IW0013I as TCE and VC have not been detected for three or more consecutive sampling events.
1609-D44	1609-M13	Former Development and Testing Laboratory (FDTL) (SWMU 075) - Team consensus reached to continue sampling IW0007I, IW0014I, IW0008I, IW0009I, IW0015S, IW0017I, and IW0018I for VOCs
1609-D44	1009-1113	using passive diffusion bags (PDB) on a biennial basis with alternating seasons (next event in Fall of 2018).
1609-D45	1609-M13	<u>C-5 Electrical Substation (C5ES) (SWMU 66)</u> - Team consensus reached to discontinue sampling of MW0010I, MW0012S, and MW0012I, as VC concentrations have been below GCTLs for at least two consecutive sampling events.
1609-D46	1609-M13	C-5 Electrical Substation (C5ES) (SWMU 66) - Team consensus reached to sample MW0017S, MW0018S, and MW0019I for VOCs using passive diffusion bags (PDB) on a biennial basis with alternating seasons (next event in Fall of 2018) pending the implementation of the IM.
1609-D47	1609-M13	Shuttle Flight Operations Contract Generator Maintenance Facility Area (SFOC) (SWMU 81) - Team consensus reached to continue sampling SFOC-IW1S and SFOC-IW4S for antimony on a biennial basis, with alternating seasons (next event in Fall 2018).
1609-D48	1609-M13	Shuttle Flight Operations Contract Generator Maintenance Facility Area (SFOC) (SWMU 81) - Team consensus reached to install a new monitoring well using a larger diameter borehole adjacent to SFOC-IW1S (screened from approximately 6 to 16 ft BLS with 0.006 inch slot screen and fine sand filter pack) and sample to evaluate if results are more representative of the surficial aquifer conditions.

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Attendees:

John Armstrong/FDEP Eric Sager/Geosyntec
Peter Cornais/FDEP Jim Langenbach/Geosyntec

Rosaly Santos-Ebaugh/NASA Rebecca Daprato/Geosyntec (phone)

Anne Chrest/NASA

Tom Peel/Geosyntec

Dinh Vo/NASA

Mark Speranza/Tetra Tech

Mike Deliz/NASA

Harry Plaza/NASA

Deda Johansen/Jacobs

Tom Peel/Geosyntec

Mark Speranza/Tetra Tech

Chris Neuman/Tetra Tech

1604-M06 Jim Langenbach/ <u>VAB LTM Area</u>

Geosyntec Goal: Obtain team consensus on path forward for VAB Area 2018

LTM program.

Discussion: The results on the 2016 LTM for the Mobile Launch Platform/Vehicle Assembly Building Area (VAB Area) were presented in the September 2016 meeting (please refer to discussion in meeting minute 1609-M13). The results from the 2016 LTM were reviewed from the September 2016 presentation.

In September 2016, the team discussed the potential need for installing wells or sampling existing wells not currently part of the LTM network that represent the current LCP boundary. Based on discussion in the September 2016 team meeting the Low Concentration Plume (LCP) from the Vehicle Assembly Building Reassessment (VABRA) and all wells in the VAB area were reviewed to determine an appropriate LTM monitoring well network to address the current LCP.

Team consensus reached to remove MLPV-IW0006IR as results have been less than GCTLs for four consecutive sampling events.

Team consensus reached to remove MLPV-IW0012I as results have been less than GCTLs for three consecutive sampling events as the dissolved plume footprint has retracted. IW0011I (currently sampled as part of MLP air sparge performance monitoring) will provide delineation for the western portion of the remaining LCP.

Team consensus reached to add MLPV-IW0020D. IW0020D was last sampled in 2003 with VC concentration of 201 μ g/L. After the 2018 LTM sampling, may request removal of MLPV-IW0018D (VC

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not detected in May 2016) which is located in the vicinity of IW0020D. If we add IW0020D to SAP, data will assist with confirming the shift in plume footprint for IW0018D.

Team consensus reached to remove MLPV-IW0048 as results have been less than GCTL for two consecutive sampling events. IW0011I (currently sampled as part of MLP air sparge performance monitoring) will provide delineation for the western portion of the remaining LCP.

Team consensus reached to removed MLPV-IW0054 and MLPV-IW0055 as results have been less than GCTLs for two consecutive sampling events.

Team consensus reached to remove MLPV-IW0049 as results have been less than GCTLs for two consecutive sampling events and add VABU-IW0001I to confirm current concentration and evaluate potential plume collapse. VABU-IW0001I was last sampled in 1997 with a VC concentration of 4.3 μ g/L.

Team consensus reached to remove MLPV-IW0050 as results have been less than GCTLs for two consecutive sampling events and add VAB-IW0005D to confirm current concentration and evaluate potential plume collapse. VAB-IW0005D was last sampled in 2003 with a VC concentration of $6.8~\mu g/L$.

Team consensus reached to remove MLPV-IW0051 as results have been less than GCTLs for two consecutive sampling events. The lack of impact is further confirmed by VAB-IW0006D to the northeast with VC less than GCTL in 2004 and PRES-IW0009 with VC less than GCTL in 06/2016.

Team consensus reached to remove MLPV-IW0056 as results have been less than GCTLs for two consecutive sampling events.

Team consensus reached to remove SATV-0009I and SATV-IW0010 as results have been less than GCTLs for two consecutive sampling events and add SATV-IW0004I to confirm current concentration and evaluate potential plume collapse. SATV-IW0004I was last sampled in 2002 with cDCE concentration of 130 $\mu g/L$.

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Team consensus reached to remove PRES-IW0007I, PRES-IW0010, and PCCA-MW0017 as results have been less than GCTLs for two consecutive sampling events.

Team consensus reached to remove PCCA-MW0004 as results have been less than GCTLs for four consecutive sampling events.

Team consensus reached on sampling and VOC analysis of the following monitoring wells for the 2018 VAB LTM: WCPS-IW0001SR, WCPS-IW0016, MLPV-IW0009I, MLPV-IW0028I, MLPV-IW0046, MLPV-IW0047, MLPV-IW0053, SATV-IW0004I, VABU-IW0001I, MLPV-IW0029D, MLPV-IW0009D, MLPV-IW0012D, MLPV-IW0018D, MLPV-IW0020D, MLPV-IW0052, MLPV-SAMW0001, MLPV-SAMW0003, PRES-IW0009, and VAB-IW0005D.

Results: Decision items 1610-D18 to D30

October 201	6 Decision it	ems Rev 0
Decision	Minutes	
No.	reference	Decision
1610-D18	1609-M06	VAB LTM Area - Team consensus reached to remove MLPV-IW0006IR as results have been less than GCTLs for four consecutive sampling events.
1610-D19	1609-M06	<u>VAB LTM Area</u> - Team consensus reached to remove MLPV-IW0012I as results have been less than GCTLs for three consecutive sampling events as the dissolved plume footprint has retracted.
1610-D20	1609-M06	$\frac{\text{VAB LTM Area}}{\text{With VC concentration of } 201\ \mu\text{g/L}}$.
1610-D21	1609-M06	VAB LTM Area - Team consensus reached to remove MLPV-IW0048 as results have been less than GCTL for two consecutive sampling events.
1610-D22	1609-M06	VAB LTM Area - Team consensus reached to removed MLPV-IW0054 and MLPV-IW0055 as results have been less than GCTLs for two consecutive sampling events.
1610-D23	1609-M06	<u>VAB LTM Area</u> - Team consensus reached to remove MLPV-IW0049 as results have been less than GCTLs for two consecutive sampling events and add VABU-IW0001I to confirm current concentration and evaluate potential plume collapse.
1610-D24	1609-M06	VAB LTM Area - Team consensus reached to remove MLPV-IW0050 as results have been less than GCTLs for two consecutive sampling events and add VAB-IW0005D to confirm current concentration and evaluate potential plume collapse.
1610-D25	1609-M06	VAB LTM Area - Team consensus reached to remove MLPV-IW0051 as results have been less than GCTLs for two consecutive sampling events.
1610-D26	1609-M06	VAB LTM Area - Team consensus reached to remove MLPV-IW0056 as results have been less than GCTLs for two consecutive sampling events.
1610-D27	1609-M06	<u>VAB LTM Area</u> - Team consensus reached to remove SATV-0009I and SATV-IW0010 as results have been less than GCTLs for two consecutive sampling events and add SATV-IW0004I to confirm current concentration and evaluate potential plume collapse.
1610-D28	1609-M06	VAB LTM Area - Team consensus reached to remove PRES-IW0007I, PRES-IW0010, and PCCA-MW0017 as results have been less than GCTLs for two consecutive sampling events.
1610-D29	1609-M06	<u>VAB LTM Area</u> - Team consensus reached to remove PCCA-MW0004 as results have been less than GCTLs for four consecutive sampling events.
1610-D30	1609-M06	<u>VAB LTM Area</u> - Team consensus reached on sampling and VOC analysis of the following monitoring wells for the 2018 VAB LTM: WCPS-IW0001SR, WCPS-IW0016, MLPV-IW0009I, MLPV-IW0028I, MLPV-IW0046, MLPV-IW0047, MLPV-IW0053, SATV-IW0004I, VABU-IW0001I, MLPV-IW0029D, MLPV-IW0009D, MLPV-IW0012D, MLPV-IW0018D, MLPV-IW0020D, MLPV-IW0052, MLPV-SAMW0001, MLPV-SAMW0003, PRES-IW0009, and VAB-IW0005D.

APPENDIX B

FIELD FORMS

(IN ELECTRONIC COPY ONLY)

Geosyntec^o

consultants

Water Quality Instrument Calibration Form

Project/Site: Water Quality Meter - Model/Serial#: 457 576 MPS / 07F100 6 21 Project#: FRO7460 Field Personnel: A. WarusilaTurbidimeter - Model/Serial#: +(Ac + 21000 1500000 415-72 Pass or

ater Quality Meter - Mo	del/Serial#:	157 516	MPS/	07F/00 6 2				Turbidity		Standard	Reading	Pass
Dissolved Oxygen		Time	Temp	Saturation	Reading	Reading	Pass or	0.1-10 NTU	Date	(NTU)	(NTU)	Fail
(FDEP SOP FT 1500)	Date	Time	(°C)	(mg/L)*	(mg/L) Acceptance	(%)	Fail	0.1-10 1010		Acceptan	ce Criteria:	+/- 10
							19 F	(A) IEV CCV	5/24/01	10.0	7.66	A
EAL IEVICCV	5/24/14	7:09	23.12	8.162		99.9/100.	19 F	CAL ICV COV	1	1	10.1	P
CAL ICV	1	17:19	24.12	8.403	8.38	79.6	P F	CAL ICV CCV				Р
CAL ICV CCV	- "	8					PF	CAL ICV CCV				P
CAL ICV CCV										Standard	Reading	Pass
Specific Conductance	Date	Time	Standard Lot #	Standard Exp. Date	Standard (mS/cm)	Reading (mS/cm)	Pass or Fail	Turbidity 11-40 NTU	Date	(NTU)	(NTU)	Fa
(FDEP SOP FT 1200)	1 01	Yes 400		Exp. Date	Accept	ance Criter	ia: +/- 5%				nce Criteri	
pecific Conductance Pro		Tes we		6/2016	1.413	1-343/1-4/	OP F	CAN TEN CCV	5/24/16	20	20.2	P
(A) 160/5CV	5/24/16	7:31	11681	10/2016	L	1,408	Ø F	CAL ICV	4	1	21.0	
CAL ICV CEY	1	17:28	L	_ ·	F	7.700	PF	CAL ICV CCV				P
CAL ICV CCV							P F	CAL ICV CCV				Р
CAL ICV CCV						Reading	Pass or	Turbidity		Standard	Reading	Pas
рН	Date	Time	Standard	The second second	Standard	(SU)	Fail	41-100 NTU	Date	(NTU)	(NTU)	Fa
(FDEP SOP FT 1100)	Date	,,,,,,	Lot #	Exp. Date	(SU)	ce Criteria:				Acceptan	ce Criteria:	
			1	1 - 2 - 354		7.28/7-00	T10000011	EALTICY CCV	5-/24/16	100	192	P
CADICPCCV	5/24/16	7:12		8/2017		3.88/4160		CAL ICV COV	1	1	100	0
CADIEVCCV	1	7119	1505047		4.0	7.84/9.93		CAL ICV CCV				P
CAL ICY CCV		7:28	2504510	1 9/2014	10.0	1 011		CAL ICV CCV				P
CAL ICV CEY		17:20	000	ME	ank		-74	CAL ICV CCV				P
CAL ICV CCY		17:22	7	AME	CHIV	9.86	-	CAL ICV CCV				P
CALICV CCV)		17:20	11'	1/	17.			Turbidity		Standard	Reading	Pas
ORP	Data	Time	Standard	Standard		Reading	Pass or Fail	>100 NTU	Date	(NTU)	(NTU)	F
(FDEP SOP N/A)	Date		Lot #	Exp. Date	(mV @ Temp °C Geosyntec Acce	(mV)					ance Criter	ria: +/
Dissolved Oxygen Mem	brane Chang	ed? Yes	1.0	1/2				EAL ICY CCV	5/24/1	6 800	796	(19)
CAL ICV CCV	5/24/1	1 733	8032	9/2019	240 @ 25	239.		CALICV CCV		J	802	19
CALICV (CV)	1	17:24	, 6	6	4	65/1	P F	CAL ICV CCV				P
CAL ICV CCV							P F	CALICY CC				Р
CAL ICV CCV							PF	CALICVEC				

CAL = Initial Calibration

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

Allow adequate time for the dissolved oxygen sensor to equilibrate during air calibration

Calibrate specific conductance using at least two standards that bracket the range of expected sample readings (unless readings <0.1 mS/cm is acceptable)

Calibrate pH using at least two standards (typ. pH 4 and 7) that bracket the range of expected sample readings; always start with pH 7; add a third calibration point if needed

* See Table FS 2200-2 on the back of this form If parameter fails to calibrate within SOP acceptance criteria then append sample results with a "J" qualifier

Monitorik, Well Sampling

Site: VABLTM Project No.: FRO756D Phase: 02 Date: 5/24/16 Sampled By: A. War Lych
Station (Well ID): Troc I wood S Purge Method: Pump & Bailer Pump Type: Submersible (Teflon SS Other) Perietaltic Contributed Plants
Pump (Make & Model): UCO HEAR Ground Purge Rate: O. gpm Water Quality Meter (Make & Model) YSI 576 128 (Water Lovel Mater) Have Model Water Lovel Mater Lovel M
Time @ End of Purging: 10:59 Total Purging Time: 39 min Depth of Pump or Intaka Tubias:
Depth to Water: 5.0 ft BTOC Total Well Depth: 12 ft BLS Screen Interval: 2 12 ft BLS Well diameter: in Well Volume: 1-14 gal

Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
10:20	Start 3.5 3.7 3.7	26.67 25.56 25.43 25.40	6.07 5.96 5.95 5.91	0.273	5.73 13.4 7.50 6.27	0.13	-41.3 -17.5 -20.4 -21.7	2.02 0.37 0.37 0.35	0.178	it 11 11 11 11 11 11 11 11 11 11 11 11 11	Plant
s:											

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: $\pm 5.0\%$ of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO \pm 0.2 mg/L or 10%, whichever is greater; and turbidity \pm 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacity	ne $\underline{6}$, 1 gal) = $\underline{0}$, 13 gallons $[3 \times \text{Equip. Vol}] = \underline{0}$, 3 gal
Sample ID: 5506-300015 -608.5-2014 05-27 Time Collected: 10-55 Comments:	Total granom
Revision Date - Ian 2015	1 x 250 mc, PE, HNDs preserved

Monitori.	Well	Sampling
-----------	------	----------

A management	
Site: VAB LTM Project No.: FRO746D Phase: 02 Date: 5/24/16 Sampled By: A. Warzfasin	
Station (Well ID): 570 - IW 000 4 S Purge Method: Pump & Bailer Pump Type:Submersible (_Teflon _SS _Other) PeristalticCentrifugalBladder	
Purge Rate: On gpm Water Quality Meter (Make & Model) 187 Man 15 Water Level Meter: Heron Dipper of	_
Time @ Stort of Purging: 7:20 Time @ End of Purging: 10.08 Total Purging Time: 78 min. Depth of Pump or Intake Tubing: 7.0	
Time @ Start of Purging:	<i>ر</i> -
Well Volume = (Total Well Depth - Depth to Water) × Well Capacity (Well Capacity)	1

Time	Cumulative Purge Volume	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
9:20	(gal) Start	24,31	6.44	0.191	49.5	0.09	-60.8	2.04	0.124	clear	plantanten
10:04	4,4	24,76	5.32	0.168	16.7	0.08	-61.9	0.14	0.104	Clou	, , , , ,
10:06	4.6	24.50	5.32	0.167	10.8	0.08	-62.1	0.15	0.109	U1 //	
10:08	4.8	24,46	Box 36	0.169	13.8	0.08	-61.1	0,12	0.110) //	

Notes:

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.

 Take additional stabilization
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

200.00	0.77
Equipment Volume = (Tubing Capacity 0.002 gal/ft × Tubing Length 9.5 ft) + (Flow Through	h Cell Volume $\frac{0}{1}$ gal) = $\frac{1}{1}$ gallons $[3 \times \text{Equip. Vol} = \frac{1}{1}]$ gal
[Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4" = 0.0020]	
Sample ID: 5FOL-100045-007.5-2016 0524 Time Collected: 10:08	Comments: for total antimorey
	1 x 250 ML PE, HWO'S preserved.

_	Well Sampling							.(24			
Site: VAB Z	7M	Project N	10.: FRC	746 Phase	02	_ Date:5	-26-16	Sampled By:	Sin Co	ppengs	
Station (Well ID	- W000	6IR PI	urge Method	: Pump Bailer	☐ Pump Typ	oe: Subm	nersible (Teflon	SS _ Other)	Peristaltic	Centrifug	al Bladder
Pump (Make &	Model):		Purge	e Rate: gpn	n Water Quality	Meter (Mak	e & Model)		Water Lev	vel Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth of	of Pump or Inta	ke Tubing:		_ ft BTOC
Depth to Water:	ft E	BTOC Total We	ell Depth:	ft BLS So Well Volum	reen Interval: ne = (Total Well Depti	2,8 +0 33	ft BLS Well dia er) × Well Capacity [Well C	meter:	in Well Vo	olume: 1; 2" = 0.163; 4" =	gal = 0.653; 6" = 1,469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start									-	
				N	10						
	\			13/1	15						
				1							
						,					
stabili 2. When p param 3. Three c condu 4. For high availa 5. If DO a sampl mg/L	ization parameter in ourging a well with neter measurements consecutive measurements extrance: ±5.0% of r h DO and/or Turbible). All attempts and/or turbidity state or to continue pror 10%, whichever	neasurements no a partially submers no sooner than 2 rements of the freading; DO is no idity, check flow should be made to a bilization parameterizing five volunt is greater; and to	sooner than 2 rged well scr 2 minutes apartive stabilizate greater than through cell to get the parteer limits canes of the scurbidity ± 5 l	n the well screen, pur 2 minutes apart; must preen, purge minimum of art, must purge minimum tion parameters listed 20% saturation at field for air bubbles – this ameters within the spennot be met (temp, placement interval; alternatives or 10%, whichever	ourge minimum of one well volument of three equipment, must be withing a measured temper may be causing excified limits. Ver H, conductivity relative stabilization were is greater.	f three equipme prior to coment volumes in the stated legrature; and to come reactify initial callanges remain a parameter li	ment volumes prior to collecting first stabilizes prior to collecting satimits for sampling: arbidity ≤ 20 NTUs. dings. Turbidity shou ibration on water quant within limits), the simits after purging fix	collecting sam ation parameter ample. temperature: : Id be verified vality meters was ampling team be we volumes of t	reple. reple measurements. ±0.2 °C; pH: risually and with performed correleader may decide screened into	Take addition ±0.2 standard a separate ture ectly before us de whether or erval are as follows:	nal stabilization I units; specific rbidity meter (if ing again, not to collect a lows: DO \pm 0.2
Equipment Volu [Tubing Inner D	ume = (Tubing Cap Diameter Capacity	pacity g Factors: $1/8'' = 0.0$	gal/ft × Tubin 0006; 1/4" =	g Length ft) 0.0026]	+ (Flow Through	h Cell Volum	ne gal) =	gallons	s [3 × Equip. V	ol =	gal]
Sample ID:	ne PV-Inic	006IR-0	30.5-2	OlV os ZV	9950	Comment	1/00 /	5260			

_	Vell Sampling								0		
Site: VAB	LTM	Project N	o.: FRO	746 Phase:	02	Date:	5 - 26 ~ [6	Sampled By:	Ben Copper	1g& /	
	: IW0009			: Pump 🗓 Bailer							
Pump (Make & N	Model):		Purge	e Rate: gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Гіте:	min. Depth o	f Pump or Inte	ike Tubing:		tt BTOC
Depth to Water:	ft I	BTOC Total We	ell Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	27 To 3	tt BLS Well dia r) × Well Capacity [Well C	meter: apacity Factors: 3/	in Well Vo	lume: ; 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				 	R						
(*)								-			
								1			
stabil 2. When paran 3. Three condu 4. For hig avails 5. If DO samp	ization parameter purging a well wit neter measurement consecutive measurement in DO and/or Turbible). All attempts and/or turbidity stee or to continue por 10%, whichever	measurements no h partially subme ts no sooner than urements of the reading; DO is no oldity, check flow is should be made abilization param ourging five volu- er is greater; and to	sooner than arged well so 2 minutes aprive stabilized of greater than through cell to get the parter limits of the soft	in the well screen, pu 2 minutes apart; must breen, purge minimum part, must purge minimum ation parameters listed a 20% saturation at fiel I for air bubbles – this trameters within the spe trannot be met (temp, purchased interval; alternal NTUs or 10%, whiche	purge minimum of of one well volument of three equipal, must be within dimeasured temporary be causing excified limits. Very hative stabilization over is greater.	three equip- me prior to coment volume in the stated erature; and to erroneous rea- rify initial cal- tanges remain in parameter 1	ment volumes prior to ollecting first stabilizes prior to collecting satimits for sampling: urbidity ≤ 20 NTUs, dings. Turbidity shoulibration on water quantimits after purging fix	ation parameter ample. temperature: ld be verified lity meters was ampling team- ve volumes of	±0.2 °C; pH: visually and with s performed corre- leader may deci- the screened into	±0.2 standard the a separate tur- ectly before us de whether or erval are as fol-	nal stabilization d units; specific rbidity meter (if ing again. not to collect a llows: DO ± 0.2
[Tubing Inner I	Diameter Capacity	Factors: $1/8'' = 0$.0006; 1/4" =	ng Length ft = 0.0026]					ns [3 × Equip. V	ol =	_gal]
Sample ID:	ALPV-IW	00091 - 03	0.5.20	Time Collected:	1010	Comments	NOC 8580				

Monitor ₁ , J											
Site: VAB L	-TM			746 Phase:							
Station (Well ID)	: IW 00091			Pump [] Bailer							
Pump (Make & M	Model):		Purge	e Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Fime:	min. Depth of	of Pump or Inta	ke Tubing:		ft BTOC
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS Sc	reen Interval: ne = (Total Well Depth	- Depth to Water	ft BLS Well dia er) × Well Capacity [Well C	meter: apacity Factors: 3/	in Well Vo 4"=0.02; 1"=0.041;	lume: 2"=0.163; 4"=	gal 0.653; 6" = 1,469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				AA							
				, ,						<u> </u>	
stabili 2. When param 3. Three condu 4. For hig availe 5. If DO a samp mg/L	zation parameter ourging a well with the termeasurement consecutive measurement to the DO and/or Turbible). All attempts and/or turbidity state or to continue por 10%, whichever	measurements no h partially subme ts no sooner than a urements of the reading; DO is no oldity, check flow is should be made abilization param ourging five volu- ter is greater; and to	sooner than rged well so 2 minutes ap five stabilized greater than through cell to get the pareter limits of the securibidity ± 5 gal/ft × Tubi	in the well screen, pu 2 minutes apart; must pereen, purge minimum part, must purge minimum ation parameters listed 1 for air bubbles – this rameters within the speciannot be met (temp, p creened interval; altern NTUs or 10%, whiche ang Length	of one well volument of one well volument of three equipals, must be within decided temporary be causing of the conductivity in the stabilization were is greater.	r three equipme prior to coment volume in the stated erature; and terroneous rearify initial calanges remain parameter I	collecting first stability as prior to collecting silimits for sampling: curbidity ≤ 20 NTUs, adings. Turbidity shoulibration on water quan within limits), the silimits after purging from gal) =	ation paramete ample. temperature: ald be verified ality meters was sampling team we volumes of	±0.2 °C; pH; visually and with s performed correleader may decide the screened interpretation.	Take addition ±0.2 standard a separate tun ectly before usi de whether or erval are as fol	nal stabilization units; specific bidity meter (if ing again, not to collect a lows: DO \pm 0.2
[Tubing Inner I	Diameter Capacity	ractors: 1/8" = 0	: "0006; 1/4" ترسیر حول	20160526 Time Collected:	Int	O	. VOC 8260	J			
Sample ID:	N- PV - I'M	0 - 46000	147.5- "	Time Collected:	1015	Comments	: NOC 046	J			

available). All attempts should be made to get the parameters within the specified limits. Verity interactions within limits), the sampling team leader may decide whether or not to collect a 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10% whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.	Monitori. J	Vell Sampling				-		: 05 (6		Ran C-n	N. 1. 0. 1. 1	
Pump (Make & Model): Pump (Make & Model): Pump (Make & Model): Pump (Make & Model): Time @ End of Purging: Total Purging Time: Min. Depth of Pump or Intake Tubing: R BTOC R BLS Screen Interval: New Volume: Purge Volume Purge Volume (gal) Femp (*C) PH Conductivity (mS/cm) Turbidity (MS/cm) Pump (NTU) Start New Volume Pump (*C) PH Conductivity (mS/cm) Pump (*C) PH Pump (*C) PH Pump (*C) PM Pump (*C) PM Conductivity (mS/cm) Pump (*C) PM Pump (*C) PM Pump (*C) PM Conductivity (mS/cm) Pump (*C) PM Conductivity (mS/cm) Pump (*C) PM Pump (*C) PM Conductivity (mS/cm) Pump (*C) PM Pump	Site: VAB	LTM	Project No	.: <u>FR07</u>	46 Phase:	01	Date: 5	-16-16	Sampled By:	DELL CON	serger	
Purge (Make & Model):	Station (Well ID)	: IW0012I	Put	ge Method:	Pump Bailer	Pump Typ	e: Subm	ersible (Teflon	SS _Other)	Peristaltic _	Centrifuga	l Bladder
Time @ Start of Purging: fit BTOC Total Well Depth: fit BLS Screen Interval:	Dump (Make & N	Aodel):		Purge	Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Depth to Water: R BTOC Total Well Depth: R BLS Screen Interval: 1 or Ye R BLS Selection Total Well Depth: Well Volume Wel	_		Time	@ End of Pu	urging:	Total Purging	Γime:	min, Depth o	f Pump or Inta	ike Tubing:		II B I O C
Cumulative Purge Volume (gal)	Depth to Water:	ft B	TOC Total Wel	l Depth:	ft BLS Sci Well Volum	reen Interval: e = (Total Well Depth	Depth to Wate	ft BLS Well dia er) × Well Capacity [Well Capacity Well Capa	meter: apacity Factors: 3/	in Well Vo 4'' = 0.02; $1'' = 0.041$;	ume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Notes: 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample. 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample. 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading, DO is no greater than 20% saturation at field measured temperature; and turbidity ≤20 NTUs. 4. For high DO and/or Turbidity, check flow through cell for air bubbles—this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again, available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again, available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again, available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again, available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed		Cumulative Purge Volume			Conductivity	Turbidity	Salinity	ORP	DO	TDS		
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Equipment Volume = (Tubing Capacitygal/ft × Tubing Lengthft) + (Flow Through Cell Volumegal) =gallons [3 × Equip. Vol =gal] [Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4" = 0.0026]	stabil 2. When parar 3. Three cond 4. For his avail 5. If DO samp	ization parameter purging a well wit meter measuremen consecutive meas uctance: ±5.0% of ph DO and/or Turbable). All attempt and/or turbidity stole or to continue or 10%, whichey	measurements not h partially submets no sooner than a urements of the reading; DO is not oldity, check flows should be made tabilization parampurging five volumer is greater; and	sooner than rged well so 2 minutes aprive stabilized greater that through celetor get the parter limits of the soft the startbullet by the startbu	creen, purge minimum part, must purge minimum part, must purge minimum tation parameters listed at 20% saturation at field of air bubbles — this transeters within the speciannot be met (temp, parened interval; alternatives of NTUs or 10%, whiches	of one well volu- um of three equipal, must be withind measured temporary be causing ecified limits. Vol., conductivity native stabilization ever is greater.	me prior to coment volumen the stated errature; and erroneous recrify initial caranges remain parameter	collecting first stabilizes prior to collecting solimits for sampling: turbidity \le 20 NTUs. readings. Turbidity should alibration on water quain within limits), the solimits after purging first stabilization of the same stab	ation paramet ample. temperature: ald be verified ality meters was ampling team ve volumes of	±0.2 °C; pH: visually and with as performed correlated representations of the screened into	Take addition ±0.2 standard the a separate tue cettly before used whether or erval are as for	nal stabilization d units; specific rbidity meter (if ing again, not to collect a flows: DO ± 0.2
Sample ID: MLPV-IW00 LI - 037.7 - 2018 Steelected: 035 Comments: VCC 8260	[Tubing Inner	Diameter Capacity	/ Factors: 1/8" = 0	.0000; 1/4"	160576.	1025	Comment	e. 1100 DJ	60			

Mo	nitorı. 🧷 🕅	ell Sampling		- 0 -	7.64	چ ائيہ	7	- 2([(Pan Ca	1.00dor	
Site	VAR	LTM	Project No	o.: FRO	746 Phase:	OL	Date:)-4b-16	Sampled By:	Dth C	perger	
Stati	on (Well ID):	IW00120	Pu	rge Method:	Pump [] Bailer	Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	ıl Bladder
Pum	p (Make & M	Iodel):		Purge	Rate: gpm	Water Quality	Meter (Make	e & Model)		Water Leve	el Meter:	A PTOC
Tim	e @ Start of I	ourging:	Time	@ End of Pu	orging:	Total Purging	Fime:	min. Depth of	f Pump or Inta	ke Tubing:	l	and and
Dep	th to Water:	ft E	TOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval: _U e = (Total Well Deptl	Depth to Water	ft BLS Well dian	neter: apacity Factors: 3/4	4'' = 0.02; $1'' = 0.041$;	2" = 0.163; 4" =	0.653; 6" = 1.469]
	Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
		Start										
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t												
	stabili 2. When param 3. Three condu 4. For hig avails 5. If DO: samp	zation parameter ourging a well with teter measurement consecutive measurement tetance: ±5.0% of h DO and/or Turbible). All attempt and/or turbidity sole or to continue or 10%, whichev	measurements no th partially subme ts no sooner than urements of the reading; DO is no bidity, check flow s should be made tabilization param purging five volu- ver is greater; and	sooner than erged well so 2 minutes ap five stabilized preater than through cell to get the parties of the sturbidity ± 5.	in the well screen, pu 2 minutes apart; must creen, purge minimum part, must purge minim action parameters listed a 20% saturation at fiel I for air bubbles – this crameters within the spe cannot be met (temp, I creened interval; altern NTUs or 10%, whiche	of one well volum of three equipled, must be withind measured temps may be causing ecified limits. Vool, conductivity native stabilization of the conductivity of the	oment volume oment volume in the stated perature; and erroneous re erify initial ca ranges remain on parameter	collecting first stabilizes prior to collecting significant for sampling: turbidity ≤ 20 NTUs, adings. Turbidity should bration on water quain within limits), the significant firmits after purging firmits.	ation paramete ample. temperature: ald be verified ality meters was sampling team we volumes of	±0.2 °C; pH: visually and with as performed correleader may deci- the screened into	Take addition ±0.2 standard the a separate to sectly before used whether or serval are as for	d units; specific arbidity meter (if sing again. not to collect a llows: DO ± 0.2
E [7	quipment Vol	ume = (Tubing C Diameter Capacity NL PV — TW	apacity	gal/ft × Tubi).0006; 1/4" = ハイ・テーク	ing Lengthf = 0.0026] Algost Z (o Time Collected: _	t) + (Flow Throu	gh Cell Volu	me gai) =	gano	ns (5 ^ equip. v		~ o _~ .1

	Well Samplin										
Site: VAB	LTM	Project N	No.: Fro	7460 Phase	02 A	Date:	5/25/10	Sampled By	r: A. w	artin	s/c.
Station (Well ID): MUPU -J	WOO18 DP	urge Method	d: Pump □ Bailer	· □ Pump Ty	pe: Subn	mersible (Teflon	SS _ Other) Peristaltic	Centrifug	gal Bladder
				e Rate: gpi							
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	of Pump or Inte	ake Tuhing:		ft BTOC
Depth to Water:	ft	BTOC Total We	ell Depth:	ft BLS So	creen Interval:		ft BLS Well dis	meter: 3	in Well Ve	lum a	пвтос
				Well Volur	ne = (Total Well Depti	n - Depth to Wat	ter) × Well Capacity [Well C	apacity Factors: 3	$\frac{111}{4''} = 0.02; 1'' = 0.041$	2'' = 0.163; 4'' = 0.163	gal = 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
					213						
				, , , , , , , , , , , , , , , , , , ,	, ,						
								-			
							•				
Notes:											
 When pu parame Three co conduct For high availabl If DO and sample mg/L or 	rging a well with ter measurements nsecutive measur tance: ±5.0% of re DO and/or Turbic le). All attempts s d/or turbidity state or to continue pu	partially submerg no sooner than 2 ements of the five ading; DO is no g lity, check flow the should be made to obligation parameter ging five volume is greater; and tur	ged well scre minutes apar re stabilization greater than 2 arough cell f get the para er limits can es of the scre bidity ± 5 N	in the well screen, pury minutes apart; must preen, purge minimum of rt, must purge minimum ion parameters listed, 20% saturation at field for air bubbles — this naturation meters within the spectanot be met (temp, pH eened interval; alternate TUs or 10%, whichever	f one well volument of the equipment of three equipments be within measured temperary be causing entified limits. Verify, conductivity rare tive stabilization per is greater.	e prior to co nent volumes the stated li ature; and tur roneous read fy initial calit nges remain parameter lin	nent volumes prior to delecting first stabilizate prior to collecting sandmits for sampling: describing the sampling of the sandmits for sampling should bration on water quality within limits), the sandmits after purging five	collecting saminon parameter inple. I be verified very meters was impling team to volumes of the	ple. measurements. ±0.2 °C; pH: = isually and with performed correct	Take addition £0.2 standard a separate tur tly before usin	units; specific bidity meter (if ng again.
[Tubing Inner Dia	meter Capacity F	actors: 1/8" = 0.00	$/1t \times Tubing$ $0.06 \cdot 1/4'' = 0$	Length ft) -	+ (Flow Through	Cell Volume	e gal) =	gallons	[3 × Equip. Vol	=	gal]

Sample ID: ML Pr - Iwoo180 - 052.5- 2018 0525 14:43 Comments: VOL

Mo	nitor _h , (Vell Sampling			F22V	_		- 26 (6		N C		
Site	: VAR	LTM	Project No	o.: FRO	746 D Phase:	_02_	Date: 5	-26-16	Sampled By:	Rou Cob	penger	
Stat	tion (Well ID): IW 0028	Pur	rge Method:	Pump [] Bailer	Pump Typ	e: Submo	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	al Bladder
Pun	np (Make & !	Model):		Purge	Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Tim	ne @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Γime:	min. Depth	of Pump or Inta	ke Tubing:		_ ft BTOC
Dep	oth to Water:	ft I	BTOC Total Wel	ll Depth:	ft BLS Sc Well Volum	reen Interval: e = (Total Well Depth	∠ [10 5] i – Depth to Wate	ft BLS Well dia er) × Well Capacity [Well (ameter:	in Well Vo 4" = 0.02; 1" = 0.041	tume: : 2" = 0.163: 4" =	gal · 0,653; 6" = 1,469
	Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Commen
		Start										
					100)						
						0					-	
F												
\parallel												
	stabil 2. When parar 3. Three cond 4. For his avail 5. If DO samp mg/L	ization parameter purging a well wit neter measuremen consecutive measuctance: ±5.0% of the DO and/or Turbable). All attempt and/or turbidity sole or to continue or 10%, whichey	measurements not h partially subments no sooner than 2 urements of the freading; DO is not bidity, check flow a should be made a tabilization parampurging five volumer is greater; and to	sooner than rged well so 2 minutes aprive stabilized greater that through cel to get the parter limits of the surbidity ± 5	in the well screen, pu 2 minutes apart; must preen, purge minimum part, must purge minimum ation parameters listed 1 for air bubbles – this rameters within the speciannot be met (temp, purgeneral interval; altern NTUs or 10%, whiche	of one well volu um of three equip I, must be withi d measured temp may be causing ecified limits. Ve oH, conductivity native stabilization	me prior to coment volume in the stated erature; and the erroneous reading initial cal ranges remains in parameter l	collecting first stabilizes prior to collecting solimits for sampling: urbidity ≤ 20 NTUs. adings. Turbidity should be added to the collection on water quantities after purging firmits after purging from the collection of the c	zation paramete sample. temperature: uld be verified ality meters was sampling team ive volumes of	±0.2 °C; pH: visually and with s performed correleader may deci- the screened into	Take addition ±0.2 standard to a separate tue cettly before us de whether or erval are as follows:	onal stabilization dunits; specification from the collect llows: DO ± 0.
ſΊ	Enhing Inner	Diameter Capacity	/ Factors: $1/8'' = 0$.0006; 1/4" =	= 0.0026]							
Sa	ample ID:	NCBN-IMOC	1287-030.	5 -20	Time Collected:	1100	Comments	: NOC 1791)			

Monitori. 💆 🕅			- 4								
Site: VAR	LTM	Project N	o.: FRO	746 Phase:	-02	Date:	5-26-16	Sampled By:	Ben Cop	penger	
				Pump Bailer							
				Rate:gpm							
Time @ Start of I	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ke Tubing:		ft BTOC
Depth to Water:	ft E	BTOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	Depth to Wat	ft BLS Well dia er) × Well Capacity [Well Ca	meter:	in Well Vo 4'' = 0.02; $1'' = 0.041$;	lume: 2"=0.163; 4"=	gal 0.653; 6" = 1,469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				HAAD							
				PUD							
stabili: 2. When proparam. 3. Three conduction conduction availates the sample mg/L.	zation parameter rurging a well with eter measurement onsecutive measurement ctance: ±5.0% of a DO and/or Turbble). All attempts and/or turbidity stee or to continue por 10%, whichever	measurements no h partially subments no sooner than 2 arements of the freading; DO is no hidity, check flow a should be made to abilization parameter is greater; and to	sooner than reged well so a minutes ap five stabilized greater than through cell to get the pareter limits on the south of	in the well screen, pur 2 minutes apart; must preen, purge minimum art, must purge minimum ation parameters listed a 20% saturation at field for air bubbles – this rameters within the speannot be met (temp, preened interval; altern NTUs or 10%, whicher	ourge minimum of one well volum of three equipals, must be within different temporary be causing excited limits. Very H, conductivity rative stabilization wer is greater.	of three equipme prior to coment volume in the stated erature; and the erroneous rearify initial caranges remain parameter I	ment volumes prior to collecting first stabilizes prior to collecting sa limits for sampling: curbidity ≤ 20 NTUs. adings. Turbidity shou libration on water qual n within limits), the salimits after purging fiv	collecting sam ation paramete mple. temperature: Id be verified ity meters was ampling team e volumes of	the screened inte	Take addition ±0.2 standard a separate turcetly before us the whether or the areas follows:	nal stabilization I units; specific rbidity meter (if ing again. not to collect a clows: DO \pm 0.2
Tubing Inner D	iameter Capacity	Factors: $1/8'' = 0$.	0006; 1/4" =	ng Lengthft = 0.0026] OSZ Time Collected:			: VOC 8260	ganon	S [S Equip. 1)		· 01

					14						
Monitorn. J &	ell Sampling		_ ^		247		26 10		Ron (NI	Denner	
Site: VAB	LTM	Project No	o.: FK	0746 Phase:	0/_	Date: 5	-26-16	Sampled By:	Day of	Fortiger	
G. C. (Wall ID)	TW0046	Pur	rge Method:	Pump Bailer	Pump Type	e: Subme	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	ıl Bladder
D (NA 1 - 0- N	4 a dal):		Purge	Rate:gpm	Water Quality	Meter (Make	: & Model)		Water Lev	el Meter:	
Pullip (Wake & W	iodei).	Time	— @ End of Pu	raina'	Total Purging	Γime:	min. Depth o	r Pump or ma	Ke Tubing.		2.
Time @ Start of I	ourging:		U D45	firs Sci	reen Interval:	5 to 45	ft BLS Well dia	meter:	in Well Vo	lume:	gal
Depth to Water:	ft l	3TOC Total Wel	ii Deptii:	ft BLS Sc.	e = (Total Well Depth	- Depth to Wate	er) × Well Capacity [Well Capacity	apacity Factors: 3/	4" = 0.02; 1" = 0.041	2" = 0.103; 4 -	0.053; 6 = 1.409]
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
						-					
					10						
				J				-			
-											-
						1					
				+							
										4	
stabil 2. When paran 3. Three conds 4. For hig avails 5. If DO samp mg/L	ization parameter purging a well wineter measurement consecutive measurement in DO and/or Turable). All attempt and/or turbidity sole or to continue or 10%, whichever the continue of Turbing Continue or Tur	measurements no th partially subme tts no sooner than surements of the f reading; DO is no bidity, check flow ts should be made stabilization param purging five volu ver is greater; and Capacity	erged well so 2 minutes ap five stabilize o greater that through cel- to get the paneter limits of times of the starbidity ± 5 gal/ft × Tub	nin the well screen, pure 2 minutes apart; must creen, purge minimum part, must purge minimum action parameters liste in 20% saturation at fie 11 for air bubbles – this arameters within the sp cannot be met (temp, parameters disternance) in the specific or 10%, which sing Length	of one well volu- num of three equipal, must be within Id measured temps may be causing recified limits. Vo pH, conductivity native stabilization	oment volume oment volume in the stated perature; and erroneous re erify initial ca ranges remai on parameter	collecting first stabilizes prior to collecting solimits for sampling; turbidity ≤ 20 NTUs, adings. Turbidity should bration on water quain within limits), the limits after purging first safer purging first prior to collection.	cation paramet cample. temperature: uld be verified ality meters was sampling team ive volumes or	er measurements ± ±0.2 °C; pH: I visually and with as performed corn a leader may dec f the screened int	±0.2 standar the a separate to the second before using the whether or the second are as for the second are as	d units; specific arbidity meter (if sing again, r not to collect a bllows: DO ± 0.2
L'Enhine Inner	Diameter Consoit	v Factors: 1/8'' = 0	0.0006: 1/4″	= 0.0026] Lol (0057) Time Collected: _							

										74	
Monitori. J	Vell Sampling	,									
Site: VAB	LTM	Project N	10.: FRC	746 Phase	: 07	_ Date:	5-26-16	Sampled By	: Ben Cop	venger	
Station (Well ID)	: IW0047	7 Pι	irge Method:	Pump Bailer	☐ Pump Typ	oe: Subm	nersible (Teflon	SSOther)	Peristaltic	Centrifuga	al Bladder
Pump (Make & N	Model):		Purge	Rate:gpm	n Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of I	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	nke Tubing:		ft BTOC
Depth to Water:	ft 1	BTOC Total We	ell Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	35 po 45 1 - Depth to Wat	ft BLS Well dian	meter:	in Well Vo	lume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				^ \	Λ						
				PA	R						
				JD	10						

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacitygal/ft × Tubing Length [Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4" = 0.0026]	ft) + (Flow Through Cell Volume	gal) = ga	allons [3 × Equip. Vol =	gal]
Sample ID: MLPV - IW0047 - 040.0 - 2016 0525 Time Collected:		8260		

	Well Sampling	-									
Site: VAR	LTM	Project N	No.: FR	3746 P Phase	e: <u>02</u>	_ Date: _	5-26-16	Sampled By	: Ren Con	PDENGEY	
Station (Well ID): MLPV-II	W0048 P	urge Method	d: Pump Bailer	· 🗆 Pump Ty	pe: Subm	nersible (Teflon	SS _ Other	Peristaltic	Centrifus	gal Bladder
Pump (Make & I	Model):		Purg	ge Rate: gpr	n Water Quality	y Meter (Mak	e & Model)		Water Le	vel Meter:	
Time @ Start of	Purging:	Time	e @ End of P	Purging:	Total Purging	Time:	min. Depth	of Pump or Inta	ake Tubing:		ft BTOC
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	= 0.653; 6" = 1.469 Comments
	Start										
				DAR							
				100							
When purparamet Three conconduct For high availabl If DO and sample a	rging a well with the measurements ancetive measurements. ancet: ±5.0% of re DO and/or Turbic e). All attempts sal/or turbidity stab- or to continue pur	partially submers no sooner than 2 ements of the five ading; DO is no g lity, check flow the should be made to obligation parameter ging five volume	ged well scre minutes apar we stabilizati greater than 2 brough cell to get the para er limits car es of the scre	in the well screen, purget minutes apart; must purge minimum ort, must purge minimum ort, must purge minimum ion parameters listed, 20% saturation at field for air bubbles – this matters within the speciment be met (temp, pH eened interval; alternat TUs or 10%, whichever	f one well volume of three equipments be within measured temperary be causing er ified limits. Verified, conductivity rative stabilization	e prior to col ent volumes the stated li ature; and tur roneous readi fy initial calib	lective to the control of the contr	collecting samption parameter mple. temperature: ± d be verified voice ty meters was proposed to the collecting sample.	ple, measurements. :0.2 °C; pH: : isually and with performed correct	Take addition ±0.2 standard a separate turi ctly before usin	units; specific bidity meter (if ng again.
Equipment Volum [Tubing Inner Dia	e = (Tubing Capa meter Capacity Fa	actors: 1/8" = 0.00	l/ft × Tubing	g Length ft) -	+ (Flow Through	Cell Volume	gal) =	gallons	[3 × Equip. Vo] =	gal]
				7,0-2016 0526 Time Collected:			VOC 8260				

Monito	rı. J W	ell Sampling				02 0		-, ,11		^		. 16
Site:	VAB	LTM	Project No	ER	O > Y O D Phase:	100 C	Date: 5	125/16	Sampled By:	_A. u	res zon	slav
Station (V	Well ID):	MUPU-JO	10049 Pur	rge Method:	Pump Bailer	Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic _	Centrifuga	al Bladder
Dump (M	ake & M	odel):		Purge	Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ S	Start of P	urging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ike Tubing:		# BIOC
					ft BLS Sc	reen Interval:	- Depth to Wate	ft BLS Well dia er) × Well Capacity [Well C	meter:	$\frac{1}{4'' = 0.02}$ in Well Vol. $1'' = 0.041$	lume: 2" = 0.163; 4" =	gal = 0,653; 6" = 1,469]
	me	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
		Start				0						
						215						
					1							
									-			-
 3. 4. 5. Equipm	stabiliz When pu parame Three co conduc For high availat If DO as sample mg/L o	ration parameter arging a well wite ter measurement on secutive measurement of DO and/or Turbole). All attempt and/or turbidity stee or to continue or 10%, whichever the Country Coun	measurements no th partially subme ts no sooner than urements of the reading; DO is no bidity, check flow s should be made tabilization param purging five volumer is greater; and to	sooner than rged well so 2 minutes aprive stabilize greater than through celt to get the parter limits of mes of the sturbidity ± 5 gal/ft × Tub	nin the well screen, pure 2 minutes apart; must creen, purge minimum part, must purge minimum pa	of one well volu um of three equip d, must be withi ld measured temp may be causing ecified limits. Ve bH, conductivity native stabilization ever is greater.	me prior to coment volume in the stated erature; and erroneous re- erify initial caranges remain in parameter	collecting first stabilizes prior to collecting significant to collecting significant to collecting significant to collecting significant to collecting. Turbidity should bration on water qualing within limits), the significant collection collection of the collecti	ation parameter ample. temperature: ald be verified dity meters was sampling team we volumes of	±0.2 °C; pH: visually and with s performed corre leader may deci- the screened inte	Take addition ±0.2 standard the a separate tue entry before used whether or erval are as for the control of t	onal stabilization d units; specific arbidity meter (if sing again, r not to collect a bllows: DO \pm 0.2
Sample	e ID: M	Lpr-Inva	049-043.	0-20	Time Collected:	19:59	Comments	s:				

Monitora.	Well Sampling	g									
Site: VAS	LTM	Project N	No.: FR	07490 Phase	02	Date:	5125/14	Sampled By	: A. n	var Ens	(n'
Station (Well ID	mupu-7	10050 Pr	urge Method	: Pump [] Bailer	· 🗆 Pump Ty	pe: Subn	nersible (Teflon _	SS _ Other)	Peristaltic	Centrifug	gal Bladder
				e Rate: gpr							
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth	of Pump or Inta	ike Tubing:		ft BTOC
Depth to Water:	ft	BTOC Total We	ell Depth:	ft BLS So	creen Interval: me = (Total Well Deptl	n – Depth to Wat	ft BLS Well di	ameter: \(\frac{1}{2}\)	in Well Vo	dume:	gal
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				70	α						
				V 3							

N	otes	
ľ	OLUG	

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional and the purge minimum of three equipment volumes prior to collecting sample.
- When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements. Take additional stabilization
 Three consecutive measurements of the first stabilization parameter of the first stabilization.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific temperature: ±0.10°C; pH: ±0.2 standard units; specific temperature: ±0.2 °C; pH: ±0.2 standard units; specific temperature: ±0
- For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if DO and/or turbidity stabilization parameter limits cannot be met (terms all conductivities and the conductivities and the conductivities and the conductivities are not be met (terms all conductivities and the conductivities and the conductivities are not the conductivities and the conductivities are not the conductivities.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacitygal/ft × Tubing Lengthft) + (Flow Through Cell Volumegal) =gallons [3 × Equip. Vol =gal	al]
Sample ID: MLPU - #10050 - 045.0 -2016 0525 14:58 Comments: V O C	

Site: VAC	LTM	Project N	Io.: FR	07460 Phase	= 2302	Date: _	5125116	Sampled By:	_ A, W	arzmo	hr.
				: Pump [] Bailer							
				e Rate: gpr							
				urging:							
							ft BLS Well dia	,			
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				1201							
				POV	5						
-											
									-		
										 -	
2. When purparame 3. Three conduct 4. For high availab 5. If DO an sample mg/L or	Notes: 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample. 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample. 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs. 4. For high DO and/or Turbidity, check flow through cell for air bubbles − this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water qualify meters was performed correctly before using again. 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater. Equipment Volume = (Tubing Capacity										
			19995 17-1	.00201				gallons	[3 × Equip. Vo]=	gal]
Sample ID: MC	, pu - two	051-050.	0-201	Time Collected: 15	110	Comments:	VOL				

Monitorn. Well Sampling

_	Vell Sampling										
Site: VAB	LTM	Project N	o: _FK	746 D Phase	:_0Z	Date:	5-26-16	Sampled By	: Ben Cop	ponger	
Station (Well ID)	: IW00E)-2 Pu	rge Method:	Pump Bailer	☐ Pump Typ	oe: Subm	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	al Bladder
Pump (Make & N	Model):		Purge	Rate:gpm	water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of Pu	urging:	Total Purging	Time:	min. Depth o	of Pump or Inta	ake Tubing:		ft BTOC
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval; ne = (Total Well Depth	40 to 50 1 - Depth to Wat	tt BLS Well dia er) × Well Capacity [Well C	meter:apacity Factors: 3/	in Well Vol	ume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				AND							
				P 110							
stabiliz	zation parameter n	neasurements no s	sooner than 2	n the well screen, pur 2 minutes apart; must p een, purge minimum o	urge minimum o	f three equip	nent volumes prior to	collecting san	ple.		

- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacitygal/ft × Tubing Length[Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4" = 0.0026]	ft) + (Flow Through Cell Volume	gal) = gallons	[3 × Equip. Vol = gal]
Sample ID: MLIV-TW052 . 045.0-20160526 Time Collect	ed: 1155 Comments:	VOC 8260	

Monitor ₁ .	Vell Sampling			Subject of W	7		10		A 6	200	
Site: VAB	LTM	Project N	o.: <u>FRO</u>	746 D Phase:	07_	Date:	5-26-16	Sampled By:	Ben Coppe	inger	
Station (Well ID)	IW0053	Pu	rge Method:	Pump Bailer	Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic _	Centrifuga	ıl Bladder
Dump (Make & N	Andel):		Purge	Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Leve	el Meter:	
Time @ Start of	Purging:	Time	@ End of Pu	arging:	Total Purging	Гіте:	min. Depth of	Pump or Inta	ke Tubing:		II BIOC
Depth to Water:	ft F	BTOC Total We	ell Depth:	ft BLS Sc Well Volum	reen Interval:	35 to 45 Depth to Water	ft BLS Well diag	meter: pacity Factors: 3/4	$\frac{1}{4'' - 0.02}$; 1" = 0.041;	ume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
			1			1					
			+								
-											
										-	
stabil 2. When paran 3. Three cond 4. For hig avails 5. If DO samp	ization parameter burging a well with meter measurement consecutive measuretance: ±5.0% of the DO and/or Turbable). All attempt and/or turbidity sale or to continue, or 10%, whichey	measurements no th partially submo- tes no sooner than surements of the reading; DO is no bidity, check flow as should be made tabilization paran purging five volu- ver is greater; and	2 minutes ap five stabiliz o greater than through cel to get the parater limits of times of the s turbidity ± 5	in the well screen, pu 2 minutes apart; must creen, purge minimum part, must purge minimation parameters listed in 20% saturation at fiel 1 for air bubbles – this grameters within the spe cannot be met (temp, parameters dinterval; alternatives).	of one well volu um of three equip d, must be withind d measured temp may be causing ecified limits. Ve oH, conductivity native stabilization ever is greater.	me prior to coment volume n the stated erature; and erroneous re- crify initial ca- ranges remain n parameter	collecting first stabilizes prior to collecting salimits for sampling; turbidity ≤ 20 NTUs. adings. Turbidity should bration on water qualing within limits), the salimits after purging firm	ation paramete ample. temperature: ld be verified lity meters wa ampling team we volumes of	±0.2 °C; pH: visually and with s performed correleader may deci- the screened into	Take addition ±0.2 standard the a separate tue cettly before used whether or cerval are as for	d units; specific arbidity meter (if sing again. root to collect a dllows: DO ± 0.2
				ing Length f = 0.0026]							gal]
Sample ID:	MLPV-IW	10053 - 04	0.0- 6	0.0020] Dive Collected:	1020	Comments	s: VUC 816	J			

Monitorn	Vell Sampling				0	-	C (C		N (000	
Site: VAB	CTM	Project No	o.: <u>FR</u>	0746 D Phase:	07	Date:	5-26-16	Sampled By:	Isen coppe	enger	
Station (Well ID): IW0054			Pump Bailer							
Pump (Make & !	Model):		Purge	Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Leve	el Meter:	
Time @ Stort of	Purging:	Time (a End of Pu	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ke Tubing:		_ft BTOC
Depth to Water:	ft F	BTOC Total Wel	ll Depth:	ft BLS Sc Well Volum	reen Interval: e = (Total Well Depth	- Depth to Water	ft BLS Well diam r) × Well Capacity [Well Capacity Well Capa	neter: apacity Factors: 3/4	in Well Vol 4"= 0.02; 1" = 0.041;	ume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				HAR							
				FUB							
										-	
						<u> </u>					
stabi 2. When parai 3. Three cond 4. For his avail 5. If DO samp	lization parameter purging a well with meter measurement consecutive measurement to the measurement of the m	measurements no th partially subme ts no sooner than a urements of the foreading; DO is no bidity, check flow as should be made tabilization param purging five volumer is greater; and to	sooner than rged well so 2 minutes aprive stabilized greater that through celt to get the pattern limits of the soft the surbidity ± 5	in the well screen, pu 2 minutes apart; must creen, purge minimum part, must purge minimation parameters listed n 20% saturation at fiel Il for air bubbles – this trameters within the spe cannot be met (temp, parameters dinterval; altern NTUs or 10%, whiche	of one well volu um of three equip d, must be withi dd measured temp may be causing ecified limits. Ve oH, conductivity native stabilization	me prior to coment volume in the stated erature; and terroneous rea rify initial ca ranges remain	sollecting first stabilizates prior to collecting sollimits for sampling: urbidity ≤ 20 NTUs. adings. Turbidity shou libration on water quan within limits), the solimits after purging firm	ation parameter imple. temperature: ld be verified lity meters wa ampling team we volumes of	±0.2 °C; pH: visually and with s performed corre leader may decid the screened inte	Take addition ±0.2 standard a separate tue ectly before us de whether or erval are as follows:	nal stabilization d units; specific rbidity meter (if ing again. not to collect a llows: DO \pm 0.2
Equipment Vo [Tubing Inner	olume = (Tubing C Diameter Capacity	apacity	gal/ft × Tub .0006; 1/4"	ing Length f = 0.0026]	t) + (Flow Throug	gh Cell Volur	me gal) =	gallor	ns [3 × Equip. V	01 =	_gal]
Sample ID:	MLPW-IW	0054-049	5.0,2	Time Collected:	11 20	Comments	: VUL 8260				

Monitori. ∫ ₹	Vell Sampling				- >	(A)	9/25/18	,			
Site: VAB	LTM	Project N	o.: FR	0 7 4 4 D Phase:	= 630	Date:	MENUMA	Sampled By:	Aiwa	us zinstr	
Station (Well ID)	MUPU-J	1W0055 Pu	rge Method:	Pump 🖺 Bailer	Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	al Bladder
Pump (Make & N	Model):		Purge	Rate:gpm	n Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
				urging:							
				ft BLS Sc Well Volum							
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
 				10	8						
stabilit 2. When proparam 3. Three conduct 4. For high availat 5. If DO a sample mg/L	zation parameter rurging a well wit eter measurement onsecutive measurement on DO and/or Turbble). All attempts nd/or turbidity stee or to continue por 10%, whichever	measurements no h partially submers is no sooner than 2 trements of the freading; DO is no olidity, check flow is should be made to abilization parame- burging five volumer is greater; and to	sooner than a reged well so 2 minutes apprive stabilizate of greater than through cell to get the pareter limits of the so of the sourbidity ± 5	n the well screen, pure 2 minutes apart; must preen, purge minimum art, must purge minimum art, must purge minimum attion parameters listed 20% saturation at field for air bubbles – this rameters within the speannot be met (temp, preened interval; altern NTUs or 10%, whicher ang Length ft. 0.0026]	purge minimum of of one well volument of three equipal, must be within dimeasured temporary be causing excified limits. Verified limits. Verified limits were stabilization ver is greater.	f three equipment for the prior to comment volument the stated derature; and the proneous rearity initial call tranges remain parameter life.	ment volumes prior to ollecting first stabilizates prior to collecting salimits for sampling: urbidity ≤ 20 NTUs. dings. Turbidity shou libration on water qualing within limits), the simits after purging five	collecting san ation paramete imple. temperature: Id be verified lity meters was ampling team the volumes of	r measurements. ±0.2 °C; pH: visually and with sperformed correleader may decid the screened inte	Take addition ±0.2 standard a separate tue ectly before us de whether or erval are as follows:	nal stabilization I units; specific rbidity meter (if ing again. not to collect a lows: DO \pm 0.2
[Tubing Inner D	iameter Capacity	Factors: $1/8'' = 0$.	0006; 1/4" =	[0.0026]	11:00		1/20				
Sample ID: MC	PU-INOU!	77 -045	0-001	Time Collected:	16.08	Comments:	<u></u>				

Site: VAB	LTM	Project N	lo.: FR	0749D Phase	02 A	Date:	5125/16	Sampled By	:A.wa	122516	
Station (Well ID): MUPU. IC	wood Pr	urge Method	: Pump [] Bailer	1 Pump Typ	oe: Subm	ersible (Teflon	SS _ Other)	Peristaltic	Centrifug	al Bladder
				e Rate: gpn							
				urging:							
				ft BLS Sc Well Volum							
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
ļ											
					n B						
				7							
Notes:											

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional and the stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacitygal/ft × Tubing Lengthft) + (Flow Through Cell Volumegal) =gallons [3 × Equip. Vol =	_ gal]
Sample ID: MUPU - TWOOTG - 035.0 - 2010 0525 19:21 Comments: VOC	

Monitori v	Vell Sampling					~					
Site: 🥦 V	CAB LTA	Project N	o.: FR	0746D Phase	073	Date:	125/16	Sampled By:	. A. L	Nara	nsloc
Station (Well ID)	PCCA -M	woody Pu	rge Method	: Pump [] Bailer	□ Pump Typ	oe: Subm	ersible (Teflon _	SSOther)	Peristaltic	Centrifug	al Bladder
Pump (Make & M	Model):		Purge	e Rate:gpm	Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth	of Pump or Inta	ke Tubing:		ft BTOC
Depth to Water:	ft F	BTOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval: e = (Total Well Deptl	ı Depth to Wate	ft BLS Well di	ameter: Capacity Factors: 3/4	in Well Vo	lume: ; 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (ºC)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
					7						
				+	レい						
				, ,							
										-	
	133									10.1	
								<u> </u>			
(6)										h	
stabiliz 2. When pu parame 3. Three co	cation parameter in arging a well with eter measurements onsecutive measur	neasurements no s partially submers no sooner than 2 rements of the fi	ooner than 2 ged well scr minutes apa ve stabilizat	the well screen, pury minutes apart; must p een, purge minimum ourt, must purge minimum tion parameters listed, 20% saturation at field	urge minimum of of one well volun m of three equipr must be within	f three equipment prior to content volumes the stated 1	nent volumes prior to ollecting first stabilize prior to collecting stability imits for sampling:	o collecting sam ation parameter ample.	ple. measurements.	Take addition	nal stabilization

- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.
Equipment Volume = (Tubing Capacitygal/ft × Tubing Lengthft) + (Flow Through Cell Volumegal) =gallons $[3 \times Equip. Vol =gal]$ [Tubing Inner Diameter Capacity Factors: $1/8'' = 0.0006$; $1/4'' = 0.0026$]
Sample ID: PCLA - MWOODY - 010.0 - 2010 05-25-5:48 Comments: VOL

Monitori.	Vell Sampling				02 6	20					
Site: VAS	LTM	Project N	o.: FR	o テリ し Phase:	030	Date: _	3/25/16	Sampled By:	- A. w	41278	10
Station (Well ID)	PLLA - M	Pu Pu	rge Method:	Pump 🗆 Bailer	☐ Pump Typ	e: Subm	ersible (Tetlon	SS _ Other)	Peristaltic	Centrifuga	al Bladder
Pump (Make & N	Model):		Purge	e Rate: gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Гіте:	min. Depth o	f Pump or Inta	nke Tubing:		ft BTOC
Depth to Water:	ft E	3TOC Total We	l Depth:	ania a	Intanuali		ft BLS Well dia er) × Well Capacity [Well C	meter:	in Well Vo	dume:	gal
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				77	10						
-				1	213						
										-	
	<u> </u>										
								1			
stabili 2. When p param 3. Three c condu 4. For hig availa 5. If DO a sampl mg/L	zation parameter purging a well wit teter measurement consecutive measurement extence: ±5.0% of h DO and/or Turbble). All attempts and/or turbidity state or to continue por 10%, whichever	measurements no h partially subments no sooner than 2 urements of the foreading; DO is no oldity, check flow is should be made to abilization paramourging five volumer is greater; and to	sooner than red well so minutes ap ive stabilized greater than through cell to get the patter limits of the sourbidity ± 5	in the well screen, pur 2 minutes apart; must pureen, purge minimum part, must purge minimum ation parameters listed at 20% saturation at field I for air bubbles – this rameters within the speciannot be met (temp, pureened interval; alternatives).	of one well volu- um of three equip I, must be within d measured temporary be causing of ecified limits. Veo H, conductivity thative stabilization wer is greater.	of three equipme prior to coment volume in the stated erature; and the erroneous rearify initial caranges remain parameter I	ment volumes prior to collecting first stabilizates prior to collecting sealimits for sampling: urbidity ≤ 20 NTUs. Idings. Turbidity shou libration on water quant within limits), the simits after purging fix	ation paramete ample. temperature: lld be verified lity meters was ampling team we volumes of	±0.2 °C; pH: visually and with s performed correleader may deci- the screened into	Take addition ±0.2 standard the aseparate turn the separate turn to the separate turn to the separate turn to the separate turn turn turn turn turn turn turn turn	nal stabilization d units; specific rbidity meter (if ing again. not to collect a llows: DO \pm 0.2
Equipment Vol [Tubing Inner I	ume = (Tubing Ca Diameter Capacity	apacity $\frac{2}{1}$ Factors: $1/8'' = 0$.	gal/ft × Tubi 0006; 1/4" =	ng Length ft = 0.0026]	r) + (Flow Throug	h Cell Volun	ne gal) =	gallon	ns [3 × Equip. V	ol =	gal]
Sample ID: Po	(A-MWO)	7-020.0	- 2011	= 0.0026] • 05 25 Time Collected: _	5.36	Comments	VOC				

Monitori.	Well Sampling				02		12 12 / 11		0	95.6. , 3.4	
Site: VAB	LTM	Project No	0.: FR	Phase:	-7 AC	Date:	125/16	Sampled By:	Awar	2ns m	. 51 11
G. C. OV-ILIE	PRBS -	1100007 Pu	rge Method:	Pump [] Bailer	Pump Typ	e: Submo	ersible (Teflon	SS _ Other)	Peristaltic	Centrituga	al Bladdel
	NA 1.1%		Purge	Rate: gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
		F21	O E 1 CD		Total Purging	Γime:	min. Depth of	t Fump or inta	ke rubing		11 2100
Depth to Water	:ft [BTOC Total We	ll Depth;	ft BLS Sc	reen Interval; ne = (Total Well Deptl	ı – Depth to Wate	ft BLS Well dia er) × Well Capacity [Well C	meter: 3/4	in Well Vo	lume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
					0	-					
					15	/					
											-
										-	
						1					
stal 2. Wher par 3. Three cor 4. For h ava 5. If DO sar mg	pilization parameter purging a well with ameter measurement consecutive measurement ductance: ±5.0% or high DO and/or Turbilable). All attemp D and/or turbidity supple or to continue to 10%, whicher the continue of the con	th partially submats no sooner than surements of the freading; DO is nobidity, check flow its should be made stabilization parare purging five voluver is greater; and	of sooner that erged well so 2 minutes a five stabilizer of greater that the property of the property of the property of the turbidity ± 2 mal/ft × Tub	nin the well screen, pure 2 minutes apart; must be creen, purge minimum part, must purge minimum 20% saturation at fiell for air bubbles – thi arameters within the sp cannot be met (temp, screened interval; alter 5 NTUs or 10%, which being Length	of one well volument of three equivalent of three equivalent of the with the definition of the well are the w	ume prior to pment volum in the stated perature; and erroneous re erify initial caranges rema on parameter	collecting first stabilities prior to collecting stabilities for sampling: turbidity ≤ 20 NTUs. Eadings. Turbidity should alibration on water quain within limits), the limits after purging for the prior to collect the same stabilities.	zation paramete sample. temperature: uld be verified ality meters wa sampling team ive volumes of	±0.2 °C; pH visually and wi as performed cor leader may dec the screened in	th a separate to rectly before uside whether of terval are as for	rd units; specific urbidity meter (if sing again. or not to collect a bllows: DO ± 0.2
[Tubing Inne	er Diameter Capacit	y Factors: 1/8" =	0.0006; 1/4"	= 0.0026]			1/00				

[Tubing Inner Diameter Capacity Factors: 1/8'' = 0.0006; 1/4'' = 0.0026]

Sample ID: PRZS = 20007I - 034.5 - 20100525Time Collected: 14.07 Comments:

Purge Method: Purge Method	Site: VAB	LTM	Project N	o.: <u>FL</u> 5	746 D Phase	02 AC	Date: 5	125/16	Sampled By:	A. u	arring	ln
Time @ Start of Purging: Time @ End of Purging: Total Purging Time: min. Depth of Pump or Intake Tubing: ft BTOC Depth to Water: ft BTOC Total Well Depth: ft BLS Screen Interval: ft BLS Well diameter: [in Well Volume: gal Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: ft BLS Well diameter: [in Well Volume: gal Well Volume: ft BLS Well diameter:	Station (Well ID)	PRES-J	wood Pu	rge Method:	Pump [] Bailer	Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic _	Centrifuga	al Bladder
Depth to Water:ft BTOC Total Well Depth:ft BLS Screen Interval:ft BLS Well diameter:fin Well Volume:gal	Pump (Make & M	1odel):		Purge	e Rate: gpm	n Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time Cumulative Purge Volume (gal) Temp (°C) pH Conductivity (mS/cm) Turbidity (NTU) Salinity (%) ORP (mV) DO (mg/L) Color Comments	Time @ Start of l	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ke Tubing;		ft BTOC
Time Purge Volume (gal) Temp (°C) pH Conductivity (mS/cm) Turbidity (NTU) Salinity (%) ORP (mV) TDS (g/L) Color Comments	Depth to Water:	ft I	BTOC Total We	ell Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	ı – Depth to Wate	ft BLS Well dia er) × Well Capacity [Well Capacity	meter: apacity Factors: 3/	in Well Vol	ume: 2" = 0 163; 4" =	gal -0.653; 6" = 1.469]
Start	Time	Purge Volume	Temp (°C)	pН						1	Color	Comments
		Start										
					PDC	3						

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, which	never is greater.
Equipment Volume = (Tubing Capacitygal/ft × Tubing Length [Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4" = 0.0026]	ft) + (Flow Through Cell Volume gal) = gallons [3 × Equip. Vol = gal]
Sample ID: PRES - Iwooog - 045.0 - 2016 0525 Time Collected:	Comments:

Monitori.	Well Sampling				07-	~ 5	(1 -111-				
Site: VAB	LTM	Project No	o.: <u>FR</u>	Phase:	0 0	Date:	123/16	Sampled By:	:_ A ~	arzin	> hr
•				Pump () Bailer							
Pump (Make &	Model):		Purge	e Rate: gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ike Tubing:		ft BTOC
Depth to Water:	ft E	BTOC Total Wel	ll Depth:	ft BLS Sc Well Volum	reen Interval: e = (Total Well Depth	- Depth to Wate	ft BLS Well dia er) × Well Capacity [Well C	meter:	$\frac{1}{4'' = 0.02}$ Well Vo	lume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comment
	Start										
					15						
							1				
			len								
stabil 2. When paran 3. Three cond	ization parameter is burging a well with neter measurement consecutive measurement interest. ±5.0% of the DO and/or Turk	neasurements no son partially submers no sooner than 2 trements of the fireading; DO is no idity, check flow and the sound in the sound	sooner than a ged well so a minutes ap ive stabilizate greater than through cell	in the well screen, pur 2 minutes apart; must preen, purge minimum art, must purge minimum attion parameters listed 20% saturation at field for air bubbles – this	ourge minimum or of one well volur im of three equipa , must be within d measured tempe may be causing e	f three equipment prior to coment volume the stated in the stated in the stated in the state of	ment volumes prior to ollecting first stabiliza s prior to collecting sa limits for sampling: urbidity ≤ 20 NTUs. dings. Turbidity shou	collecting san ation paramete imple. temperature:	r measurements. ±0.2 °C; pH: visually and with	Take addition ±0.2 standard a separate tur	nal stabilization units; specific
availa 5. If DO samp mg/L	able). All attempts and/or turbidity sta le or to continue p or 10%, whicheve	should be made to abilization parame ourging five volumer is greater; and to	o get the pareter limits canes of the sourbidity ± 5	rameters within the spe annot be met (temp, placemed interval; alternations NTUs or 10%, whicher	cified limits. Ver H, conductivity rative stabilization ver is greater.	ify initial cal anges remair parameter li	ibration on water qual within limits), the simits after purging five	ampling team ve volumes of	s performed corre leader may decided the screened inte	ctly before usi le whether or rval are as fol	not to collect a lows: DO ± 0.2
[Tubing Inner I	Diameter Capacity	Factors: 1/8" = 0.0	0006; 1/4" =	ng Length ft; 0.0026] -20100525 Time Collected:	13:53	Comments:	Vol				

Monitorn V	Vell Sampling				02						•
Site: VAD	LTM	Project No	: FRO	Phase:	23/0	Date: 5	125/16	Sampled By:	A. Wa	2/25 25/1	<u> </u>
Station (Well ID)	: SATU-	IN 000 Pu	☐ rge Method:	Pump 🗓 Bailer	☐ Pump Typ	e: Subme	ersible (Teflon	SS _ Other)	Peristaltic _	Centrifuga	al Bladder
Pump (Make & M	Model):		Purge	e Rate: gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Гіте:	min. Depth of	f Pump or Inta	ke Tubing:		ft BTOC
Depth to Water:	ft F	Total Wel	l Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	- Depth to Wate	ft BLS Well dian er) × Well Capacity [Well Ca	neter:	in Well Vo 4" = 0.02; 1" = 0.041;	lume: : 2" = 0.163; 4" =	gal 0.653; 6" = 1,469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
					0						
				1							
	-										
						-					-
stabil 2. When paran 3. Three condu 4. For hig availa 5. If DO samp	ization parameter purging a well with neter measurement consecutive measurement in DO and/or Turbable). All attempts and/or turbidity state or to continue por 10%, whichever	measurements no h partially subments no sooner than 2 trements of the foreading; DO is no bidity, check flow as should be made to abilization paramourging five volumer is greater; and to	sooner than red well so minutes ap ive stabilizate through celto get the pater limits of the surbidity ± 5	in the well screen, pu 2 minutes apart; must creen, purge minimum part, must purge minimum ation parameters listed in 20% saturation at fiel I for air bubbles – this grameters within the spe cannot be met (temp, p creened interval; altern NTUs or 10%, whiche	of one well volu um of three equip I, must be within d measured temp may be causing ecified limits. Ve oH, conductivity native stabilization	me prior to coment volume in the stated erature; and the erroneous rearify initial cal ranges remain in parameter l	ollecting first stabilized so prior to collecting satisfies prior to collecting satisfies prior to collecting satisfies prior to collecting satisfies urbidity ≤ 20 NTUs. Indings. Turbidity shout the satisfies after purging fix in the satisfies after purging fix the satisfies after pur	ample. temperature: Id be verified lity meters was ampling team we volumes of	r measurements. ±0.2 °C; pH; visually and with s performed correleader may decide the screened interpretation.	Take addition ±0.2 standard in a separate turn ectly before using the whether or erval are as follows:	nal stabilization I units; specific rbidity meter (if ing again. not to collect a llows: DO \pm 0.2
constitution of	S' ()	. Cashanat 1/9" — ()	(1006 - 17/1" =	ing Length fi = 0.0026]				ganor	19 [3 v Edmby A	OI =	· Parl
Sample ID: 5	AN- IWO	1009I-02	1.5 - 2	0.0020] 0.16 0.5 2.5 Time Collected: _/	5:28	Comments	:VOC				

Monitori. J	ven Sampung				a 7	i					
Site: VAS	LTM	Project N	o.: FR	D Phase	036	Date: 5	125/16	Sampled By:	Awa	ransla	<u> </u>
Station (Well ID)): <u>SATV-I</u>	W0010 Pu	irge Method	: Pump [] Bailer	□ Pump Typ	e: Submo	ersible (Teflon	SSOther)	Peristaltic	Centrifuga	al Bladder
Pump (Make & N	Model):		Purge	e Rate: gpn	n Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
				urging:							
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS So Well Volum	creen Interval: ne = (Total Well Deptl	ı – Depth to Wate	ft BLS Well dia er) × Well Capacity [Well C	meter:	in Well Vo 4" = 0.02; 1" = 0.041	lume: ; 2" = 0.163; 4" =	gal = 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				176	D13						
				P 2							
						4 1					
										-	
stabili 2. When p param 3. Three c condu 4. For higl availa 5. If DO a sampl mg/L	zation parameter rurging a well with eter measurement onsecutive measurement cance: ±5.0% of a DO and/or Turbble). All attempts and/or turbidity stree or to continue por 10%, whichever	measurements no h partially subments no sooner than 2 arements of the freading; DO is no sidity, check flow a should be made to abilization parameter is greater; and to	sooner than rged well see 2 minutes ap ive stabilized greater than through cell to get the pareter limits comes of the sourbidity ± 5	in the well screen, pu 2 minutes apart; must preen, purge minimum art, must purge minimum ation parameters listed a 20% saturation at fiel I for air bubbles – this rameters within the spe annot be met (temp, preened interval; altern NTUs or 10%, whiche	purge minimum of of one well volumed three equipals, must be within dimeasured temporary be causing excified limits. Verified limits. Verified limits is attive stabilization ver is greater.	f three equipment prior to coment volumes in the stated liberature; and tuerroneous reactify initial callunges remain in parameter liberature.	ment volumes prior to oblecting first stabilizes prior to collecting satimits for sampling: arbidity ≤ 20 NTUs. dings. Turbidity shou ibration on water quate within limits), the samits after purging fix	acollecting samation parameter imple. temperature: ld be verified a lity meters was ampling team we volumes of	pple. r measurements. ±0.2 °C; pH: visually and with performed corre leader may decid the screened inte	Take addition ±0.2 standard a separate turectly before using the whether or erval are as follows:	nal stabilization I units; specific rbidity meter (if ing again. not to collect a llows: DO \pm 0.2
Tubing Inner D	Diameter Capacity	Factors: $1/8'' = 0$.	0006; 1/4" =	ng Length ft = 0.0026]					s [3 × Equip. V	ol =	gal]
Sample ID: 5	two	010-040	.0 -	Time Collected: /	5 40	Comments:	V) (

Monitorn. J											
Site: VAB	LTM	Project N	10.: FR	0746 Phase	: 07	_ Date:	5-26-16	Sampled By	: Ben Cop	penger	
Station (Well ID)	: TW000):	FR P	urge Method	l: Pump 🗆 Bailer	☐ Pump Typ	oe: Subm	ersible (Teflon	SS Other	Peristaltic	Centrifug	al Bladder
Pump (Make & M	Model):		Purg	e Rate:gpn	n Water Quality	Meter (Mak	e & Model)		Water Lev	vel Meter:	
Time @ Start of	Purging:	Time	@ End of P	Purging:	Total Purging	Time:	min. Depth	of Pump or Inta	ake Tubing:		ft BTOC
Depth to Water:	ft l	BTOC Total We	ell Depth: _	ft BLS So	creen Interval:	2, r5 to 12	.5 ft BLS Well die er) × Well Capacity [Well C	ameter:	in Well Vo	olume: ; 2" = 0,163; 4" =	gal - 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comment
	Start						<u> </u>				
				1010							
•••				LAR							
stabiliz 2. When puparame 3. Three coconduct 4. For high availab 5. If DO ar sample mg/L of	ration parameter in origing a well with eter measurements onsecutive measu etance: ±5.0% of r DO and/or Turbi ole). All attempts ind/or turbidity state or to continue pror 10%, whichever time = (Tubing Cap	neasurements no same partially submers no sooner than 2 rements of the freeding; DO is no dity, check flow a should be made to bilization parameters in greater; and to pacity	sooner than 2 ged well sore minutes apaive stabiliza greater than through cell to get the pareter limits canes of the sourbidity ± 5 Mal/ft × Tubin	n the well screen, pur 2 minutes apart; must preen, purge minimum cart, must purge minimu tion parameters listed, 20% saturation at field for air bubbles – this rameters within the speciment be met (temp, placement interval; alternative or 10%, whichever ag Length	ourge minimum of one well volum of three equipm, must be within I measured tempe may be causing e cified limits. Ver H, conductivity rative stabilization for is greater.	f three equipment prior to coment volumes the stated light rature; and turnoneous reactify initial calinges remain parameter lin	nent volumes prior to ollecting first stabilizate prior to collecting satisfies for sampling: prior to collecting satisfies for sampling: prior to collecting satisfies for sampling: prior to collecting satisfies and satisfies for sampling satisfies for satisfies satisfies for satisfies satisfie	o collecting samation parameter ample. temperature: ld be verified vality meters was ampling team be very columes of the	ple. r measurements. ±0.2 °C; pH: visually and with performed corre leader may decid the screened inte	Take addition ±0.2 standard a separate tur ctly before using the whether or rval are as fol	nal stabilization units; specific bidity meter (if ing again. not to collect a lows: DO \pm 0.2
[Tubing Inner Di	ameter Capacity l	Factors: $1/8'' = 0.0$	0006; 1/4" =	0.0026]							-
Sample ID:	CPS-IN	100012K -	ロロナグー	Zol 60526 Time Collected:	1175	Comments:	MAC 5.	2(n())			

Monitori.	Well Sampling	Ş									
Site: VAB	LTM	Project N	10.: FR	0746 Phase	: 02	_ Date:	5-26-16	Sampled By	: Ben Cop	penger	
Station (Well ID)	: Iwool6	Pt	irge Method	: Pump [] Bailer	Pump Typ	oe: Subm	ersible (Teflon	_SSOther	Peristaltic	Centrifuga	al Bladder
Pump (Make & N	Model):		Purge	e Rate:gpn	n Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth	of Pump or Int	ake Tubing:		ft BTOC
Depth to Water:	ft l	BTOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	15 to 25	ft BLS Well di	ameter:	$\frac{\text{in Well Vo}}{\sqrt{4'' = 0.02}}$; $1'' = 0.041$	lume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.4691
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comment
	Start										
-											
				BNR							
				1 10 10							
								1			
stabiliz 2. When puparame 3. Three coconduct 4. For high availabt 5. If DO ar sample mg/L co	ration parameter narging a well with eter measurements on secutive measurements and/or Turbi del. All attempts and/or turbidity state or to continue pror 10%, whichever me = (Tubing Capameter Capacity I	neasurements no sa partially submer so no sooner than 2 rements of the fireading; DO is no dity, check flow to should be made to bilization parameter ging five voluments is greater; and turneacity	ged well ser minutes apa ve stabilizat greater than hrough cell o get the para ter limits ca es of the ser rbidity ± 5 N	n the well screen, pure minutes apart; must peen, purge minimum curt, must purge — this remeters within the specunot be met (temp, placemed interval; alterna NTUs or 10%, whichever g Lengthft) 100506 Time Collected:	urge minimum of one well volum of three equipm must be within measured temper may be causing entified limits. Verial, conductivity rative stabilization er is greater.	Ethree equipment prior to connent volumes the stated light rature; and turn roneous reactify initial calinges remain parameter line. Cell Volume	nent volumes prior to ollecting first stabilize prior to collecting simits for sampling: imits for sampling: irbidity \leq 20 NTUs. dings. Turbidity show bration on water qual within limits), the simits after purging firm	o collecting sam ation paramete ample. temperature: Id be verified a lity meters was ampling team we volumes of the	pple. r measurements. ±0.2 °C; pH: visually and with performed corre leader may decid the screened inter	Take addition ±0.2 standard a separate turictly before using the whether or a real are as follows:	units; specific bidity meter (if ng again. not to collect a lows: DO ± 0.2
Sample ID: W	Cho TW	1010 -820	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Time Collected:	. (0	Comments:	NOC 17PC				

Monitor. Well Sampling

A
Site: VAB UTM Project No.: FRO 3460 Phase: 02 Date: 5/24/16 Sampled By: A. Warzinshi
Station (Well ID): Market Service Method: Pump & Bailer D. Pump Type: Submersible (Teflon SS Other) Peristaltic Centrifugal Bladder
Water Level Meter: Purge Rate: 61 gpm Water Quality Meter (Make & Model) 451 556 Ap3 Water Level Meter: Purge Rate:
Time @ End of Purging: 1) 5 Total Purging Time: () min. Depth of Pump or Intake Tubing: 7777 ft BIOC
Time @ Start of Purging:
Well volume (18m) was a part of the part o

Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
AN	Start	24.13	-637	0.001		0.00 -	-107.5	8			
77.96		27.76	6.35		39.9	4,71	-151.5	1.90	5.592	new	
11:77	start	120	6.05	9,108	17.4	5.08	-173.8	0.20	5.919	01 12	
11:51	0.7	76.56	100	9.110	12.0	5,08	-175-2	0.15	5.919	11 (1	
11:53	0.9	26.57	6.06		16.4	5.07	-177.3	0.12	5.904	4 61	
1155	1.1	26,62	6.06	9.088	10.1	3.07	() ()				
					-						
						-					

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

mg/L or 10%, whichever is greater, and turbulity 15 14103 of 15%, whichever	
Equipment Volume = (Tubing Capacity One of the state of t	es Call Volume Q · gall = 0 · Gallons [3 × Equip, Vol = 0 · Gall
Equipment Volume = (Tubing Capacity gal/ft × Tubing Length 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	in Cen volumegan
Thing Inner Diameter Canacity Factors: $1/8" = 0.0000$; $1/4" = 0.0020$	
Sample ID: MLRV - SAMW 0001 - 645.5 - 2016 05 24 Time Collected: 11:55	Comments: Voc\$
Sample ID: Malv-SAMW Ood Time Collected:	Comments:
	3 x 40 ml (G, HCl preserved)

Monitora **Well Sampling**

Site: VAB LTM Project No.: FRO7460 Phase: 02 Date: 5/24/16 Sampled By: A. Warzasoln
Station (Well ID): MLPV-SAYLOGG 3 Purge Method: Pump A Bailer D Pump Type: Submersible (Teflon SS Other) Peristaltic Centrifugal Bladder
Pump (Make & Model): Geotell Geograp Purge Rate: O. gpm Water Quality Meter (Make & Model) 15 556 mps Water Level Meter: Hero Differ.
Time @ Find of Purging: 13/19 Total Purging Time: 4 min. Depth of Pump or Intake Tubing: 73/3 ft BTOC
Depth to Water: 403 ft BTOC Total Well Depth: 48 ft BLS Screen Interval: 47 - 48 ft BLS Well diameter: 47 in Well Volume: 47 on the Well Volume: 48 ft BLS Well Capacity [Well Capacity Factors: 3/4" = 0.02; 1" = 0.041; 2" = 0.163; 4" = 0.653; 6" = 1.469]

Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
13:05	Start	30.65	7.79	4,717	147	2,48	-151,9	2.30	3.025	cloudy	_
13:12	0.7	26.95	6.81	6.652	48,6	3,63	-203,3	0.10	4.326	n at	
13:15	1.0	26,98		6.696	12,7	3-102	-211.2	0.10	4.322	clew	
13:17	1.2	27.00		6.644	11,7	3,62	-211.7	0.09	4.315	v, /1	
13.17	1.4	26,89		6.642	9.04	3.62	-212.9	0.08	4.311	vi er	
	-1		92.								

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO \pm 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacity	ne <u>0 . 1</u> gal) = <u>0</u>	22 gallons [3 × F	quip. Vol = <u>0.6</u> Zal]
[Tubing Inner Diameter Capacity Factors: $1/8'' = 0.0006$; $1/4'' = 0.0026$]			
Sample ID: MURY - GRAW 0003-045, 7 - 2016 07 24 13:19 Comments:	: VOC5	h	
D : : Due 1- 2016	3x, 40mc	66, HCI	prese rued

	Well Sampling					_					
Site: VAB	LTM	Project N	10.: <u>FRO</u>	7490 Phase	:_ 23	Bate:	5/25/16	Sampled By	- A. N.	15 27 sh	,
Station (Well ID): F36- M	WOOOI PU	arge Method:	Pump Bailer	□ Pump Typ	e: Subm	nersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	al Bladder
Pump (Make & I	Model):		Purge	Rate:gpm	n Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of Pu	arging:	Total Purging	Гіте:	min. Depth o	f Pump or Inta	ake Tubing:		ft BTOC
Depth to Water:	ft I	BTOC Total We	ell Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	- Depth to Wat	ft BLS Well dian	neter:	in Well Vol	ume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comment
	Start										

Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				100	5						
				7 1							

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacity		ft) + (Flow Through	Cell Volume	gal) =	gallons [3 × Equip. Vol =	gal]
Sample ID: +56 - MW0001 - 030	0.0 - 2010 05 25 Time Collected:	10:03	Comments:	VOC		

VAD LTA

Monitor ₁ .	Well	ampling

Site: F56-MW00	Project No.: FRo 7	Phase:	nte: 5/257/6 Samp	oled By: A. urv	noin
Station (Well ID):	Purge Method: Po	ump [] Bailer [] Pump Type:	_ Submersible (Teflon SS	Other) Peristaltic Cen	trifugal Bladder
Pump (Make & Model):	Purge Rat	e:gpm Water Quality Mete	er (Make & Model)	Water Level Meter	
Time @ Start of Purging:	Time @ End of Purgin	g: Total Purging Time:	min. Depth of Pum	p or Intake Tubing:	ft BTOC
Depth to Water:	_ft BTOC Total Well Depth:	ft BLS Screen Interval: Well Volume = (Total Well Depth - Dep	ft BLS Well diameter: th to Water) × Well Capacity [Well Capacity		

	OF REAL PROPERTY.			Tren volum	e (roun wen bepin	Depui to was	er) × Well Capacity [Well Ca	pacity ractors. 3/	1 -0.02, 1 -0.041,	2 - 0.103; 4 -	$0.033; \ 6" = 1.409$
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				000							
				R VV							

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
- 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample.
- 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ± 0.2 °C; pH: ± 0.2 standard units; specific conductance: $\pm 5.0\%$ of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs.
- 4. For high DO and/or Turbidity, check flow through cell for air bubbles this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.
- 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater.

Equipment Volume = (Tubing Capacitygal/ft × Tubing Length [Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4" = 0.0026]	ft) + (Flow Through Cell Volume	_ gal) =	_ gallons [3 × Equip. Vol = §	gal]
Sample ID: F36 - MWOOD 3 - 025.0 - 2010 0575 Time Collected:	10.124 Comments:	VOC		

Monitori. J	Well Sampling	<u> </u>									
				0746D Phase							
Station (Well ID)	: 1(3400	A-MW081)) irge Method	: Pump [] Bailer	☐ Pump Typ	oe: Subm	nersible (Teflon	SS _ Other)	Peristaltic	Centrifug	al Bladder
Pump (Make & N	Model):		Purge	e Rate: gpn	n Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of I	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ake Tubing:		ft BTOC
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS So Well Volum	reen Interval: ne = (Total Well Deptl	1 – Depth to Wat	ft BLS Well dia er) × Well Capacity [Well Capacity	meter:	in Well Vo /4" = 0.02; 1" = 0.041	lume: 2" = 0.163; 4" =	gal = 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				D 6	-						
					215						
				, , , , , , , , , , , , , , , , , , ,							
			•								
-											

- 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample.
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Equipment Volume = (Tubing Capacity	gal/ft × Tubing Length 0.0006; 1/4" = 0.0026]	_ft) + (Flow Throug	h Cell Volume	gal) =	gallons [3 × Equip. Vol =	gal]
Sample ID: (C3706 A - MW000 -	010.0-2016 0525 Time Collected:	11:25	Comments:	106		

Monitors. J. N	ell Sampling			→49○ Phase:	03 19	Data	(- la - 1/1)	Sampled By:	A. w	4120051	N'
Site: VAB	LTM	Project No).: <u>FR</u> 03	7490 Phase:	-02	Date:	723 / (V	cc Other)	Peristaltic	Centrifuga	l Bladder
	1 . 2	44 2 n	Mathad:	Pump [] Bailer	📋 — Pump Typ	e: Subme	rsible renon	_ Other)			
				D-4 gnm	Water Ouality	Meter (Make	& Model)				
					Take Direction	l ime	min, Dopin o		_		
Time to Water	ft F	BTOC Total We	ll Depth:	ft BLS Sc	reen Interval:	- Denth to Water	ft BLS Well dia	meter: apacity Factors: 3/4	$_{4''=0.02; 1''=0.041}$	lume: ; 2" = 0.163; 4" =	gai 0.653; 6" = 1.469]
Depth to water.	Cumulative			Conductivity	Turbidity	Salinity	ORP	DO	TDS	Color	Comments
Time	Purge Volume (gal)	Temp (°C)	pН	(mS/cm)	(NTU)	(%)	(mV)	(mg/L)	(g/L)		
	Start										
				TO SE							
	-										
			-								-
								1			
											
						-					
stabi 2. When para 3. Three conc 4. For hi avai 5. If DO sam mg/	lization parameter purging a well was meter measurement consecutive measurement ductance: ±5.0% of gh DO and/or Turbable). All attempt and/or turbidity ple or to continue	r measurements in the partially submints no sooner than surements of the of reading; DO is ribidity, check flowers should be made stabilization parameter purging five volucies of the property of the propert	erged well so a minutes a five stabilition greater that through content to get the properties of the literature of the l	hin the well screen, p n 2 minutes apart; must screen, purge minimum apart, must purge minimum traction parameters liste an 20% saturation at fine ell for air bubbles – this parameters within the si cannot be met (temp, screened interval; alte 5 NTUs or 10%, which bing Length	n of one well volumm of three equied, must be with eld measured tem is may be causing pecified limits. V pH, conductivity rnative stabilizatine ever is greater.	ume prior to opment volume, in the stated perature; and gerroneous referify initial corranges rema on parameter ugh Cell Volument	es prior to collecting limits for sampling turbidity ≤ 20 NTUs. cadings. Turbidity sho alibration on water qu in within limits), the limits after purging	sample. : temperature ould be verified ality meters we sampling tear five volumes of	: ±0.2 °C; pH d visually and w as performed con n leader may de of the screened in	ith a separate trrectly before ucide whether caterval are as f	urbidity meter (if using again. or not to collect a collows: DO ± 0.2
[Tubing Inner	· Diameter Capaci	ty I detois. 170		10(100525	10:55	_	Voc				

Sample ID: LC340GA - MW0002 - 010.0 - 2016 0525 1015 Comments: VOC

Monitory.	Well	Sam	pling

Site: VARUTM	Project No.: FRO744D	Phase:	Date: 5/25/1	Sampled By	:_ A, _	~ ar ziv	rslr
Station (Well ID): 43906A	Purge Method: Pump []	Bailer Pump Typ	oe: Submersible (Teflo	onSSOther)	Peristaltic	Centrifugal	l Bladder
Pump (Make & Model):	Purge Rate:	gpm Water Quality	Meter (Make & Model)		Water Lev	el Meter:	
Time @ Start of Purging:	Time @ End of Purging:	Total Purging	Time:min. De	epth of Pump or Inta	ike Tubing:		ft BTOC
Depth to Water:ft BTO		BLS Screen Interval:	ft BLS We h – Depth to Water) × Well Capacity [ell diameter: Well Capacity Factors: 3/			
Cumulative	Conduc	tivity Tuebidity	Solinity OPP	no	TDS		

Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				PD	P						
				1 /							

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Equipment Volume = (Tubing Capacity	gal/ft × Tubing Length	ft) + (Flow Through Cell Volume _	gal) = gallons [3 × Equip. Vol =	gal]
[Tubing Inner Diameter Capacity Factors: 1/8	8'' = 0.0006; 1/4'' = 0.0026]			35 35
Sample ID: 4390 GA - MW 0004	- 0(0.0 - 20(le 0 5 25) Time Collecte	ed: 10:47 Comments:	V 2 C	

Monitorn. J. V	Vell Sampling				03		-1 11	a 11D	A. 11	14 (7:00	150
Site: VAB	LTM	Project N	o.: FRO	ティ <mark>レン</mark> Phase:		Date:	5/25/14	Sampled By:	71,	0 110	1 Dladdon
	1124N-A	- MUNCOUPIL	rge Method:	Pump [] Bailer	Pump Typ	e: Subm	ersible (Tetlon	SS _Other)	Peristante	Commaga	Bridder
Pump (Make & M	Model):		Purge	Rate:gpm	Water Quality	Meter (Make	2 & WIOGEI)	of Dump or Inta	ke Tuhing		ft BTOC
Time @ Start of	Purging:	Time	@ End of Pu	urging:	Total Purging	l'ime:	min, Depui c	atom I	in Well Vo	lume:	gal
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Deptl	- Depth to Water	ft BLS Well dia	'apacity Factors' 3/4	4" = 0.02; 1" = 0.041	2" = 0.163; 4" =	0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				0 - (-						
				PDI	2	Ш					
										-	
							-				
							+				
stabi 2. When para 3. Three conc 4. For hi avai 5. If DO sam mg/	dization parameter purging a well with meter measurement consecutive measurement ductance: ±5.0% of the DO and/or Turbiable). All attempt and/or turbidity and/or turbidity and the continue L or 10%, whiche	r measurements no ith partially subm nts no sooner than surements of the f reading; DO is no rbidity, check flow its should be made stabilization parara purging five volu- ver is greater; and	o sooner than erged well so 2 minutes a five stabilized greater that through ceep to get the parties of the sound through the sooner than the	nin the well screen, pure a 2 minutes apart; must creen, purge minimum part, must purge minimum attion parameters listed an 20% saturation at fiell for air bubbles – thi arameters within the spannot be met (temp, screened interval; alter 5 NTUs or 10%, which bring Length	a of one well volunum of three equived, must be with old measured temps may be causing pecified limits. V pH, conductivity mative stabilization of the conductivity ever is greater.	ume prior to pment volum in the stated perature; and erroneous re erify initial c ranges rema on parameter	collecting first stabilities prior to collecting limits for sampling: turbidity ≤ 20 NTUs. Eadings. Turbidity should be alibration on water quain within limits), the limits after purging for the purging for the prior to collect the prior to collect the purging for the prior to collect the prior the prior to collect the pr	zation paramet sample. temperature: ould be verified ality meters we sampling team	±0.2 °C; pH visually and with the screened in	±0.2 standar th a separate to rectly before used whether of terval are as for	d units; specific urbidity meter (if sing again, r not to collect a bllows: DO ± 0.2
Equipment Vo [Tubing Inner	olume = (Tubing C Diameter Capacit	ty Factors: 1/8" =	0.0006; 1/4"	= 0.0026]	11/06		V	ř –			

VOL

Comments:

					14						
	Well Sampling				040000						
Site: VAB	LTM	Project N	0.: FR	Phase	03	Date:	5125/1Le	Sampled By	: _ A. wa	runslo	<u> </u>
Station (Well ID)	1:63406-	A -000 7pg	rge Method:	Pump Bailer	□ Pump Typ	e: Subm	ersible (Teflon	SS Other)	Peristaltic	Centrifugal	Bladde
Pump (Make & N	Model):		Purge	Rate:gpn	n Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ Start of l	Purging:	Time	@ End of P	urging:	Total Purging	Гіте:	min. Dept	th of Pump or Inta	ake Tubing:	t	t BTOC
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS So	reen Interval: ne = (Total Well Depth	- Depth to Wate	ft BLS Well	diameter:	$\frac{1}{4'' = 0.02}$ in Well Vo	lume: 2" = 0.163; 4" = 0.	gal 653; 6" = 1,469
	Cumulative Purge			Conductivity	Turbidity	Salinity	ORP	DO	TDS		

Time	Cumulative Purge Volume (gal)	Temp (ºC)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				>							
				PD	13						
				,							
1											

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Equipment Volume = (Tubing Capacitygal/ft × Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4"		_ ft) + (Flow Throug	h Cell Volume	gal) =	gallons [3 × Equip. Vol =	gal
Sample ID: LC 34 06 A - MUSON 7 - 024.	Time Collected:	11:03	Comments:	VOL		

Station (Well ID): LC34 OCA MM OF The Method: Pump Bailer Pump Type: Submerable Tefton SS Other) Peristaltic Centrifugai Bladder Pump (Make & Model): Pump Gate: gpm Water Quality Meter (Make & Model) Weter Level Meter: Pump Gate: gpm Water Quality Meter (Make & Model) Weter Level Meter: If IDO Total Vell Depth: Total Purging Time: min. Depth of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: It Is IOC Intel & Station of Pump or Intake Tubing: Intel & Intel	Mo	onitorn _ \	Vell Sampling				03 ~	`	-111		Δ.		-1-1
Station (Well ID): \$\begin{array}{c} \begin{array}{c} \be	Site	e: VAB	LTM	Project No	o.: _ FRO	Phase:	2/2	Date:	5/25/16	Sampled By:	A. U	ra (to n)	510
Time @ Start of Purging:	Sta	tion (Well ID	163906	A-MW DOGE	nge Method:	Pump Bailer	□ Pump Typ	e: Subme	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	ıl Bladder
Time @ Start of Purging:	Pui	np (Make & I	Model):		Purge	Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Depth to Water: R BIS Screen Interval: file IS Screen Interval:	Tir	ne @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ke Tubing:		tt BTOC
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FT. Ling Innor Digmeter Conactive Eactors: $1/X = 0.0000$, $1/4 = 0.0020$		stabi 2. When parat 3. Three cond 4. For his avail 5. If DO samp	lization parameter purging a well with meter measurement consecutive measuctance: ±5.0% of ph DO and/or Turbable). All attempt and/or turbidity sole or to continue or 10%, whichever the sole of the well-and turbidity sole or to continue or 10%, whichever the sole or 10%, which we sole	measurements no th partially subme ts no sooner than urements of the reading; DO is no bidity, check flow s should be made tabilization param purging five volu- ter is greater; and	sooner than erged well so 2 minutes ap five stabilized greater than a through cell to get the parter limits of the sturbidity ± 5	2 minutes apart; must creen, purge minimum part, must purge minimum ation parameters liste n 20% saturation at fie II for air bubbles – this arameters within the speannot be met (temp, screened interval; alter in NTUs or 10%, which	of one well volu- num of three equi- d, must be with- ld measured temps may be causing ecified limits. Ver pH, conductivity native stabilization	ime prior to coment volume in the stated perature; and the erroneous reaching initial ca- ranges remains on parameter	collecting first stabilizes prior to collecting selimits for sampling: turbidity ≤ 20 NTUs. adings. Turbidity shoulibration on water quan within limits), the selimits after purging fi	ation paramete ample. temperature: ald be verified ality meters wa sampling team ve volumes of	±0.2 °C; pH: visually and with s performed correleader may deci- the screened into	±0.2 standard the a separate tuectly before uside whether or erval are as follows:	anal stabilization d units; specific arbidity meter (if sing again. not to collect a llows: DO \pm 0.2
Sample ID: LC3906A -Mwasog - 024.7 - 2016 6525 Time Collected: 11:18 Comments:		Taking Innon	Diameter Canacity	J Factors, I/X = U	LUUUO, 174 -	- 0,00401							

Monitori V	Vell Sampling		Name Oct 1		02	×	1011		0 V-	4		
Site: JAP	, GM	Project No	o.: FRO	74 Phase	0	Date:	5-46-16	Sampled By:	Konker	<u> </u>		
Station (Well ID)	FDTL - Th	LPu FUOOU	rge Method:	: Pump Bailer	□ Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic _	Centrifuga		
Pump (Make & N	/lodel):		Purge	e Rate:gpm	n Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:		
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	ike Tubing:		_ft BTOC	
					r . 1		ft BLS Well diametry Well Capacity Well Ca	meter:	in Well Vo	lume:	gal	
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments	
	Start	A										
1												
-					1/2							
				X.								
· · · · · · · · · · · · · · · · · · ·												
											-	
				-	-							
Notes: 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample. 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample. 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤ 20 NTUs. 4. For high DO and/or Turbidity, check flow through cell for air bubbles – this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again. 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater. Equipment Volume = (Tubing Capacitygal/ft × Tubing Length ft) + (Flow Through Cell Volume gall = gallons [3 × Equip. Vol = gall [Tubing Inner Diameter Capacity Factors: 1/8" = 0.0006; 1/4" = 0.0026]												
[Tubing Inner I	Mameter Canacity	Eactors: $1/X'' = ()$	0006: 1/4" =	= 0.0026] 5.0 - 20100526; Time Collected: _								

	Well Sampling			1	67		-		Λ	. 0 .	
Site: VAR	LTM	Project N	o.: FRO	746 D Phase	:_07_	Date:	5-26-16	Sampled By:	: Ben Loppe	inge it	
Station (Well ID): IW000g	YI Pu	rge Method	: Pump Bailer	☐ Pump Typ	e: Subm	ersible (Teflon	SSOther)	Peristaltic	Centrifuga	al Bladder
Pump (Make &	Model):		Purge	e Rate: gpm	1 Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth of	of Pump or Inta	ıke Tubing:		ft BTOC
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS Sc	reen Interval:	Depth to Water	ft BLS Well dia	ameter:	in Well Vo	lume: 2" = 0.163; 4" =	gal = 0.653; 6" = 1,469
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Commen
	Start										
				010							
				PIR							
				1100							
stabili 2. When p param 3. Three c condu 4. For higl availa 5. If DO a sampl mg/L	zation parameter regurging a well with eter measurement consecutive measurement actions and/or Turb ble). All attempts and/or turbidity state or to continue por 10%, whicheve	measurements no son partially submers no sooner than 2 trements of the freading; DO is no idity, check flow should be made to abilization parameter in greater; and to	sooner than a ged well see minutes ap- ive stabiliza greater than through cell to get the par- eter limits ca- ter so of the so- arbidity ± 5 l	in the well screen, pur 2 minutes apart; must pureen, purge minimum of art, must purge in the second art bubbles — this exameters within the speannot be met (temp, placement interval; alternative or 10%, whiches	ourge minimum of one well volunt of three equipments be within a measured temper may be causing edified limits. Ver H, conductivity rative stabilization over is greater.	f three equipa me prior to coment volumes a the stated la crature; and to crroneous rea- rify initial cal anges remain a parameter li	ment volumes prior to oblecting first stabilized prior to collecting settimits for sampling: arbidity ≤ 20 NTUs. dings. Turbidity shou ibration on water qual within limits), the samits after purging fix	o collecting samation parameter ample. temperature: ald be verified vality meters was ampling teamage very volumes of the	pple. r measurements. ±0.2 °C; pH: visually and with performed corre leader may decid the screened inter	Take addition ±0.2 standard a separate turctly before uside whether or rval are as follows:	nal stabilization I units; specific rbidity meter (it ing again. not to collect a lows: DO ± 0.2
Equipment Volu [Tubing Inner D	ume = (Tubing Capacity	pacity g Factors: $1/8'' = 0.0$	al/tt × Tubir 0006; 1/4" =	ng Length ft) 0.0026] 0(1005 Zle Time Collected:	+ (Flow Through	n Cell Volum	gai) =	ganon:	s (5 ^ Equip. VC	л —	gail
Sample ID:	TV00	08I - 01	5.0-2	Olleos Zle Time Collected:	1335	Comments:	VOC 8260)			

FUTU Revision Date - Ian 2015

Monitorn.	Vell Sampling										
Site: VAR	LTM	Project N	o.: FRO	746 D Phase	:_02_	Date:	5-26-16	Sampled By:	Ben Cop	penger	
Station (Well ID)	: IWOUGI	Pu	rge Method	: Pump (1) Bailer	☐ Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	ıl Bladder
Pump (Make & M	Model):		Purge	e Rate:gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	
				urging:							
Depth to Water:	ft	BTOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	Depth to Wate	ft BLS Well dia	meter: Capacity Factors: 3/	in Well Vo	lume: 2" = 0.163; 4" =	gal 0.653; 6" = 1,469
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Commen
	Start										
				DIR							
stabili: 2. When p param 3. Three c condu 4. For high availal 5. If DO a sample mg/L	zation parameter rurging a well with eter measurements on secutive measurements and DO and/or Turbble). All attempts and/or turbidity state or to continue por 10%, whicheve	neasurements no in partially submers no sooner than 2 trements of the freading; DO is no idity, check flow should be made to abilization parameterization greater; and to its greater; and greate	sooner than 2 ged well son a minutes aprive stabilizar greater than through cell to get the pareter limits canes of the sourbidity ± 5 l	in the well screen, pur 2 minutes apart; must preen, purge minimum of art, must purge minimum tion parameters listed a 20% saturation at field for air bubbles – this parameters within the speciannot be met (temp, plearened interval; alternative NTUs or 10%, whichey	ourge minimum of one well volumed three equipments, must be within a measured temper may be causing excited limits. Ver H, conductivity reactive stabilization wer is greater.	f three equipment prior to coment volumes the stated literature; and turroneous reactify initial calinges remain parameter literature in the parameter literature.	nent volumes prior to oblecting first stabilize prior to collecting sampling: arbidity ≤ 20 NTUs. dings. Turbidity shou obtation on water qua within limits), the samits after purging fix	collecting samation parameter ample. temperature: ld be verified vality meters was ampling teamage ve volumes of the	pple. r measurements. ±0.2 °C; pH: visually and with performed correleader may decid the screened inter	Take addition ±0.2 standard a separate tur ctly before uside whether or rval are as follows:	units; specification units; specification bidity meter (ing again, not to collect lows: DO ± 0.5
Equipment Volu [Tubing Inner D	ime = (Tubing Ca iangeter Capacity	pacityg Factors: 1/8" = 0.	al/ft × Tubir 0006; 1/4" =	ng Length ft)	+ (Flow Through	n Cell Volum	e gal) =	gallon	s [3 × Equip. Vo)] =	gal]
Sample ID:	FAB-I WO	009I - 01	5.0-20	Time Collected:	1305	Comments:	NOC 8560				

FOTL

Monitor	Well Sampling	,									
Site: UA	BUTM	Project N	10.: <u> </u>	D7465 Phase	: 02	_ Date:	5126/16	Sampled By:	B.	<u> </u>	
				l: Pump 🗆 Bailer							al Bladder
Pump (Make & I	Model):		Purge	e Rate:gpn	n Water Quality	Meter (Mak	e & Model)		Water Lev	vel Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth	of Pump or Inta	ke Tubing:		_ ft BTOC
Depth to Water:	ft I	BTOC Total We	ell Depth:	ft BLS So	creen Interval;_ ne = (Total Well Deptl	ı – Depth to Wate	ft BLS Well dia	ameter:	in Well Vo	olume: ; 2" = 0.163; 4" =	gal : 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comment
	Start										
				57							
-											
							<u> </u>				
					TEL.						
stabiliz 2. When puparame 3. Three coconduct 4. For high availab 5. If DO ar sample	ration parameter narging a well with ter measurements on secutive measuretance: ±5.0% of r DO and/or Turbiole). All attempts ad/or turbidity state or to continue por	neasurements no so partially submer so no sooner than 2 rements of the fireading; DO is no dity, check flow the should be made to bilization parame urging five volum	ged well ser minutes apa ve stabilizar greater than through cell o get the para ter limits ca les of the ser	n the well screen, pur 2 minutes apart; must preen, purge minimum of art, must purge minimum tion parameters listed, 20% saturation at field for air bubbles — this nameters within the speciment be met (temp, placement interval; alternative or 10%, whichever	or purge minimum of one well volum of three equipm of three equipm must be within measured tempe may be causing exified limits. Ver I, conductivity rative stabilization	f three equipment prior to coment volumes the stated literature; and turnoneous reactify initial calinges remain	nent volumes prior to ollecting first stabilizate prior to collecting satimits for sampling: ribidity \leq 20 NTUs. Hings. Turbidity should bration on water qual within limits), the satings.	collecting sampation parameter imple. temperature: ± Id be verified voity meters was ampling team le	ple. measurements. :0.2 °C; pH: isually and with performed corre eader may decide	Take addition ±0.2 standard a separate tur ctly before uside whether or	units; specific bidity meter (if ng again. not to collect a
Equipment Volution [Tubing Inner Di	me = (Tubing Cap ameter Capacity I	pacity g	al/ft × Tubin 0006; 1/4" =	g Length ft) 0.0026]	+ (Flow Through	Cell Volume	e gal) =	gallons	[3 × Equip. Vo	ol =	gal]
				Time Collected:	405	Comments:	VOC				

Monitori.	Vell Sampling	D ' (N	En	07460 Phase:	07	Date: S	1210/16	Sampled By:	B. (·	
Station (Well ID)	. 44100	14 T Pu	rge Method:	Pump Bailer	Pump Typ	e: Subme	rsible (Teflon	SS _Other)	Peristaltic	Centrifuga	ıl Bladder
Pump (Make & M	Model):		Purge	Rate:gpn	n Water Quality	Meter (Make	& Model)	CD Into	les Tubing:	rei Wicter.	ft BTOC
Time @ Start of I	Purging:	Time	@ End of Pr	urging:	Total Purging	Time:	min. Depth of	of Pump or Inta	ke rubing.	1	and and
Depth to Water:	ft I	BTOC Total We	ell Depth:	ft BLS So Well Volum	ereen Interval:	1 - Depth to Water	ft BLS Well dia r)×Well Capacity [Well C	ameter: Capacity Factors: 3/	4'' = 0.02; 1'' = 0.041	1; 2" = 0.163; 4" =	0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				2							
				77	15						
			-								
										-	
stabil 2. When paran 3. Three condu 4. For hig avail 5. If DO	ization parameter ourging a well wineter measurement consecutive measuctance: ±5.0% of the DO and/or Turable). All attempt and/or turbidity state or to continue	measurements not the partially submotts no sooner than surements of the freading; DO is not bidity, check flow its should be made stabilization parameters.	o sooner than erged well so 2 minutes applied to greater than with through center to get the parties of the sooner than the so	in the well screen, pu 2 minutes apart; must creen, purge minimum part, must purge minimum part, must purge minimum part, must purge minimum part, must purge minimum part and part and part and part and lift for air bubbles – this parameters within the sp. carened interval; alter is NTUs or 10%, which	of one well volum of three equid, must be with ald measured temps may be causing secified limits. VpH, conductivity native stabilization	nme prior to comment volume in the stated perature; and the erroneous readerify initial cal	ollecting first stabilities prior to collecting silimits for sampling: urbidity ≤ 20 NTUs. Idings. Turbidity should be to the libration on water quantities libration to the collection of the libration of the l	zation paramete sample. temperature: uld be verified ality meters wa	±0.2 °C; pH visually and wirs performed con-	 take addition ±0.2 standard the a separate turectly before used whether or 	nal stabilization d units; specific rbidity meter (if sing again. not to collect a
Equipment Vo	lume = (Tubing C	apacity	_gal/ft × Tub	ing Length	ft) + (Flow Throu	gh Cell Volun	ne gal) =	gallo	ns [3 × Equip. '	Vol =	_gal]

									4				
Site:	1AB LTM	Project N	o.:	107460 Phase	:_02_	Date:	5/26/11e	Sampled By:	B.				
Station (W	ell ID): TWO	D) 5_5_ Pu	rge Method:	Pump [] Bailer	□ Pump Typ	e: Subm	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	ıl Bladder		
Pump (Ma	ke & Model):		Purge	Rate:gpn	n Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:			
Time @ St	art of Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	f Pump or Inta	nke Tubing:		ft BTOC		
	Vater:ft l			ADIC C	raan Interval:		ft BLS Well dian	meter:	in Well Vo	lume:	gal		
Tim	Cumulative Purge	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments		
	Start												
				1	1)14								
				1							3		
			-										
-													
2. W 3. T 4. F 5. If	Notes: 1. When purging well with pump or intake tubing within the well screen, purge minimum of one equipment volume prior to first stabilization parameter measurements no sooner than 2 minutes apart; must purge minimum of three equipment volumes prior to collecting sample. 2. When purging a well with partially submerged well screen, purge minimum of one well volume prior to collecting first stabilization parameter measurements. Take additional stabilization parameter measurements no sooner than 2 minutes apart, must purge minimum of three equipment volumes prior to collecting sample. 3. Three consecutive measurements of the five stabilization parameters listed, must be within the stated limits for sampling: temperature: ±0.2 °C; pH: ±0.2 standard units; specific conductance: ±5.0% of reading; DO is no greater than 20% saturation at field measured temperature; and turbidity ≤20 NTUs. 4. For high DO and/or Turbidity, check flow through cell for air bubbles – this may be causing erroneous readings. Turbidity should be verified visually and with a separate turbidity meter (if available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again. 5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2 mg/L or 10%, whichever is greater; and turbidity ± 5 NTUs or 10%, whichever is greater. Equipment Volume = (Tubing Capacity												
[Tubing I	nner Diameter Capacity	Factors: $1/8'' = 0$.0006; 1/4" =	= 0.0026]									
Sample II	D: FDTU- FW	00155- 0	10.0-2	Time Collected:	1320	Comments	:						

	Well Sampling								Λ -		
Site: VAR	LTM	Project N	o.: FRC	3746 Phase		Date: 5	5-26-16	Sampled By:	: Bon Cop	penger	
Station (Well ID	= I woo 1	7 Pu	rge Method	: Pump Bailer	□ Pump Typ	e: Subm	nersible (Teflon	SS _Other)	Peristaltic	Centrifuga	al Bladder
Pump (Make & I	Model):		Purge	e Rate:gpm	Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Гіте:	min. Depth o	f Pump or Inta	ke Tubing:		ft BTOC
Depth to Water:	ft 1	BTOC Total We	ll Depth:	ft BLS Sc	reen Interval: he = (Total Well Depth	- Depth to Wat	ft BLS Well dia er) × Well Capacity [Well C	meter: apacity Factors: 3/4	$\frac{1}{4'' = 0.02}$; 1" = 0.041;	lume: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Commen
	Start										
				+	DR						
					1.0						
		×									
											-
	,										
Notes:											
stabili: 2. When p param 3. Three c conduct 4. For high availat 5. If DO a sample mg/L	zation parameter is urging a well with eter measurement onsecutive measurement of the ctance: ±5.0% of a DO and/or Turbible). All attempts ind/or turbidity state or to continue por 10%, whichever	measurements no so he partially submer is no sooner than 2 urements of the fireading; DO is no idity, check flow a should be made to abilization parameter is greater; and to	ged well scr minutes apa ve stabiliza greater than through cell o get the par eter limits ca les of the sc arbidity ± 5 l	n the well screen, pur 2 minutes apart; must pureen, purge minimum cart, must purge minimu tion parameters listed, 20% saturation at field for air bubbles – this nameters within the specannot be met (temp, placement interval; alternative or 10%, whichever	ourge minimum of of one well volum of three equipm must be within measured tempe may be causing e cified limits. Ver H, conductivity reative stabilization wer is greater.	three equipment prior to coment volumes the stated larature; and turnoneous readify initial callinges remain parameter li	ment volumes prior to ollecting first stabiliza s prior to collecting sa limits for sampling: urbidity ≤ 20 NTUs. dings. Turbidity shoul ibration on water qual a within limits), the satinits after purging five	collecting sam tion parameter mple. temperature: d be verified v ity meters was impling team l e volumes of t	ple. measurements. ±0.2 °C; pH: : visually and with performed correct eader may decid he screened inter	Take addition ±0.2 standard a separate tur ctly before usi le whether or rval are as foll	units; specific bidity meter (if ng again. not to collect a lows: DO ± 0.2
[Tubing Inner D	iameter Capacity	Factors: $1/8'' = 0.0$)006: 1/4" =	ng Length ft) 0.0026]		Cell Volum	ne gal) =	gallons	s [3 × Equip. Vo	ol =	gal]
Sample ID:	TTL - I	W00171-	0(5.0	Zolloszle / Time Collected: /	415	Comments:	V 0	<u></u>			

ee: VAR (: IW0019I	Pur	ge Method:	Pump Bailer Rate: gpm	Pump Type Water Quality Total Purging	e: Subme Meter (Make	& Model)	f Pump or Inta	Water Lev	el Meter:	ft BTOC
me @ Start of	Purging:ft E	STOC Total Wel	Depth:	ft BLS Sci Well Volum	reen Interval:	Depth to Wate	ft BLS Well dia	meter: apacity Factors: 3/4	in Well Vo 4'' = 0.02; $1'' = 0.041$	lume: ; 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	(gal) Start										
				AAG							
				(I)							
				-							
2. When para 3. Three con 4. For h ava 5. If DC san	purging a well warmeter measurement consecutive measurement ductance: ±5.0% or igh DO and/or Tuilable). All attempt and/or turbidity and/or to continue	ith partially submints no sooner than surements of the of reading; DO is ribidity, check flowers should be made stabilization parage purging five voluments and the stabilization for the stabilization parage purging five voluments and the stabilization parage.	erged well s 2 minutes a five stabilize to greater the w through ce to get the p meter limits umes of the	hin the well screen, p n 2 minutes apart; must screen, purge minimum apart, must purge minim zation parameters liste an 20% saturation at fice ell for air bubbles – this parameters within the sp cannot be met (temp, screened interval; alte 5 NTUs or 10%, which	n of one well volum of three equed, must be with all measured terms may be causing pecified limits. In pH, conductivity rnative stabilizative ever is greater.	ume prior to ipment volumnin the stated aperature; and g erroneous roverify initial cy ranges remain parameter	turbidity ≤ 20 NTUs eadings. Turbidity shealibration on water quin within limits, the r limits after purging	sample. ;: temperature ould be verifie uality meters w e sampling tean five volumes of	e: ±0.2 °C; photostally and was performed compleader may depend on the screened in	1: ±0.2 standa ith a separate trrectly before used whether on the trial are as f	rd units; specific turbidity meter (if using again. or not to collect a follows: DO ± 0.2
Equipment V [Tubing Inne	olume = (Tubing or Tubing or Diameter Capaci	Capacity ty Factors: 1/8" =	_gal/ft × Tul 0.0006; 1/4"	bing Length	ft) + (Flow Thro	ugh Cell voll	Vac 23 (C				
Sample ID:	FTDL-ING	19I - 015.	0-201	Time Collected:	13.30	Commen	its: <u>VVC X 16</u> 0	<u> </u>			

Monitoring V	Vell Sampling		FR	0746D Phase	02	Date: 5	-27-16	Sampled By:	Ben Co	ppenger	
Site: 1/413 2	27/1	Project N	o.: _/ //	Pump Bailer		Culum	recible (Teffon	SS Other)	Peristaltic	Centrifuga	ıl Bladder
Station (Well ID)): MW 0010	Pu Pu	rge Method:	Pump Bailer	Pump 1yp	e: Subme	erstole (remon	_55 0e.,	Water Le	vel Meter	
Pump (Make & N	Model):		Purge	e Rate:gpm	n Water Quality	Meter (Make	& Model)	CD Into	lea Tubing:	VOI 14101011	ft BTOC
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Гіте:	min. Depth	of Pump or Inta	t W-11 V	-lumat	gal
Depth to Water:	ft E	BTOC Total We	ell Depth:	erging:ft BLS So Well Volun	creen Interval: ne = (Total Well Depth	- Depth to Wate	ft BLS Well dia er) × Well Capacity [Well C	ameter: Capacity Factors: 3/	111 Well Ve 4" = 0.02; 1" = 0.04	1; 2" = 0.163; 4" =	0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comment
	Start										
				DT							
				1	1	-					
stabil 2. When param 3. Three cond 4. For his avail 5. If DO samp	dization parameter purging a well with meter measuremen consecutive measuctance: ±5.0% of ph DO and/or Turbable). All attempt and/or turbidity sole or to continue or 10%, whichev	measurements not he partially submits no sooner than urements of the reading; DO is not bidity, check flows should be made tabilization parar purging five volver is greater; and	o sooner than erged well so 2 minutes ap five stabilize o greater that we through ce to get the paneter limits of the sound that is turbidity ± 5	ain the well screen, pure 2 minutes apart; must creen, purge minimum part, must purge minimum action parameters listed in 20% saturation at field for air bubbles – this arameters within the speciannot be met (temp, screened interval; alter 5 NTUs or 10%, which	of one well volu- num of three equip- id, must be withing old measured temps s may be causing specified limits. Volu- pH, conductivity native stabilization ever is greater.	me prior to coment volume n the stated perature; and correction initial carrify initial carranges remain parameter	collecting first stabilities prior to collecting limits for sampling turbidity ≤ 20 NTUs. adings. Turbidity shoulibration on water quant within limits), the limits after purging for the stability of the stabil	zation parametesample. temperature: ould be verified a lality meters was sampling team five volumes of	±0.2 °C; pH visually and wing performed con leader may deaf the screened in	s. Take addition (: ±0.2 standard the a separate turectly before used whether on terval are as for	anal stabilization of units; specification of the content of the collect llows: DO ± 0.
L'Inhing Innat	Luameter Canacii y	/ FAGIOIS, 1/0 = '	0.0000 17 1	ing Length							
Sample ID:	SES-MWOOL	01-022,5	-2016057	Time Collected:	1100	Comments	: VOCS				

Monitoring	Well Sampling		Ε0.	746D Phase:	02	ζ.	-27-16	Complet Dry	Zen	alsen	c.
Site: VAR	SETM	Project N	o.: +RO	796 <u>U</u> Phase:	-	Date: $\underline{\hspace{0.2cm}}$	C/ //	Sampled By:	D. Lachte	Contribute	al Bladder
Station (Well I	(D): MW (0012-1 Pu	rge Method	: Pump Bailer	□ Pump Typ	e: Submo	ersible (Teflon	SS _Other)	Peristaltic	Centriluga	,i Blaudel
Pump (Make &	& Model):		Purge	e Rate: gpm	Water Quality	Meter (Make	e & Model)		Water Lev	el Meter:	0. P/FO/C
Time @ Start o	of Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth	of Pump or Inta	ke Tubing:		пвюс
Depth to Wate	er:ft I	BTOC Total We	ell Depth:	urging:ft BLS Sc Well Volum	reen Interval: ne = (Total Well Depth	Depth to Water	ft BLS Well di er) × Well Capacity [Well of	ameter: Capacity Factors: 3/		; 2" = 0.163; 4" =	0.653; 6" = 1.469
Time	Cumulative Purge Volume (gal)	Temp (°C)	рН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Commen
	Start										
				Y	1	7	5	-			
				V							
stal 2. When par 3. Thre con 4. For the ave 5. If Do san	bilization parameter in purging a well wirameter measuremente consecutive measuremente consecutive measuremente to and/or Turbiallable). All attempte O and/or turbidity sumple or to continue at Lor 10%, whichever	measurements not the partially submotts no sooner than the partially submotts no sooner than the partial predicts of the freading; DO is not bidity, check flow as should be made tabilization paran purging five voluver is greater; and	sooner than erged well s 2 minutes a five stabiliz o greater than through ce to get the paneter limits turnes of the sturbidity ± 5	nin the well screen, put 2 minutes apart; must creen, purge minimum part, must purge minimum tation parameters liste in 20% saturation at fie arameters within the speciannot be met (temp, parameters), alternovers or 10%, which	of one well volu- um of three equip d, must be withing Id measured temps amay be causing ecified limits. Vo pH, conductivity mative stabilization	oment volume oment volume in the stated perature; and erroneous re- erify initial ca- ranges remai on parameter	collecting first stabilities prior to collecting limits for sampling turbidity ≤ 20 NTUs. addings. Turbidity should be alibration on water quant within limits, the limits after purging	ization parametes sample. : temperature: build be verified a sampling team five volumes of	±0.2 °C; pH: visually and with as performed corn leader may dec f the screened int	. Take addition to the separate turectly before uside whether or terval are as fo	onal stabilization dunits; specification with the desired again. In not to collect allows: DO ± 0.
Equipment \ [Tubing Inne	Volume = (Tubing C er Diameter Capacity	apacity y Factors: 1/8" = 0	gal/ft × Tub).0006; 1/4"	ing Length f = 0.0026]	t) + (Flow Throu	gh Cell Volui	me gal) =	gallo			- <i>p</i> _{**1}]
Sample ID.	SES-MW0012	I-022.5-2	016 052=	Time Collected:	112)	Comments	s:	>			

Monitoring V	Vell Sampling		T-0	0746D_Phase	17	_	^{>} ワコ ル		Por		20
Site: VAB	211	Project N	10.1 TRO	07961) Phase	.02	Date:	-C7-16	Sampled By	Den	-0Pf	lenger
Station (Well ID	: MWOC	9123 Pu	irge Method:	: Pump Bailer	☐ Pump Typ	oe: Subm	ersible (Teflon	SS _ Other)	Peristaltic	Centrifuga	al Bladder
Pump (Make & 1	Model):		Purge	e Rate: gpn	n Water Quality	Meter (Mak	e & Model)		Water Lev	el Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth	of Pump or Inta	ake Tubing:		ft BTOC
Depth to Water:	ft I	BTOC Total We	ell Depth:	urging:ft BLS Sc	ereen Interval: / ne = (Total Well Deptl	1 – Depth to Wat	ft BLS Well dia er) × Well Capacity [Well C	ameter: Capacity Factors: 3/	in Well Vo	lume: ; 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comment
	Start										
						1					
				7))					
								#31			
				, , , , , , , , , , , , , , , , , , ,	-	1					
stabili 2. When p param 3. Three o	zation parameter i urging a well with	measurements no ship partially subments no sooner than 2 parements of the f	sooner than inged well so inged minutes aparties	in the well screen, pur 2 minutes apart; must preen, purge minimum art, must purge minimum artion parameters listed	purge minimum of of one well volui am of three equip l, must be within	of three equip one prior to coment volume on the stated	ment volumes prior to ollecting first stabilizes s prior to collecting s	o collecting san ation paramete ample.	nple. r measurements.	Take addition	nal stabilization

available). All attempts should be made to get the parameters within the specified limits. Verify initial calibration on water quality meters was performed correctly before using again.

5. If DO and/or turbidity stabilization parameter limits cannot be met (temp, pH, conductivity ranges remain within limits), the sampling team leader may decide whether or not to collect a sample or to continue purging five volumes of the screened interval; alternative stabilization parameter limits after purging five volumes of the screened interval are as follows: DO ± 0.2

Equipment Volume = (Tubing Capacity _____gal/ft × Tubing Length _____ft) + (Flow Through Cell Volume _____gal) = _____gallons [3 × Equip. Vol = _____gal]

[Tubing Inner Diameter Capacity Factors: 1/8'' = 0.0006; 1/4'' = 0.0026]

mg/L or 10%, whichever is greater; and turbidity \pm 5 NTUs or 10%, whichever is greater.

Sample ID: SES-MW00125-012, 5-20160529 Time Collected: 1130

Monitoring V	Vell Sampling ノイM	D : (N	FRO:	746.D Phase	.02	Date:	5-27-16	Sampled By:	Ben Co	wolnge	
Site: V/115	MUCC	Project N	o.: / V/V	Pump Bailer	Pump Tyr	e: Subm	ersible (Teflon	SS Other)	Peristaltic	Centrifuga	alBladder
				e Rate:gpm							
Pump (Make & N	Alodel):	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	of Pump or Inta	ke Tubing:		ft BTOC
Depth to Water:	rurging:ft F	BTOC Total We	ell Depth:	ft BLS Sc	creen Interval:	7 - 1 Z	ft BLS Well dia	ameter:	$\frac{1}{4^n = 0.02}$ in Well Vo	olume: 1; 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
						5					
					1	1 3					
					<i>\</i>	1 1					
						1 '					
stabili 2. When p param 3. Three condu 4. For high availa 5. If DO a sampl mg/L Equipment Voltor Tubing Inner I	zation parameter of burging a well with the ter measurement consecutive measurement extrance: ±5.0% of the DO and/or Turbible). All attempts and/or turbidity state or to continue por 10%, whichever the continue of 10%, whichever the continue of 10% and the continue of 1	measurements no h partially submers no sooner than arements of the reading; DO is no sidity, check flows should be made abilization paramourging five volumer is greater; and apacity Factors: 1/8" = 0	sooner than erged well so 2 minutes ap five stabilized greater than through cell to get the parter limits of the starbidity ± 5 gal/ft × Tubi .0006; 1/4" =	in the well screen, pu 2 minutes apart; must creen, purge minimum eart, must purge minimum eation parameters listed 1 for air bubbles – this crameters within the spe cannot be met (temp, p creened interval; altern NTUs or 10%, whiche mg Lengthft = 0.0026] 7 Time Collected:	of one well voluum of three equip d, must be withind measured temp may be causing ecified limits. VeoH, conductivity native stabilization ever is greater.	or three equip- me prior to co- ment volume in the stated erature; and to erroneous rea- rify initial cal ranges remain in parameter I	ollecting first stabilizes prior to collecting s prior to collecting s limits for sampling: urbidity ≤ 20 NTUs, dings. Turbidity should be a within limits), the simits after purging fine gal) =	ration paramete ample. temperature: alld be verified ality meters was sampling team ve volumes of	r measurements ±0.2 °C; pH: visually and wit s performed corr leader may dec the screened int as [3 × Equip. V	the additional transfer to the	nal stabilization units; specific bidity meter (ifing again, not to collect a lows: DO ± 0.2

Monitoring \	Well Sampling		⊢ ∧ 5	8 / - 1.0	A 50		~ ^ 1/		7.		
Site: VAB	SM	Project N	o.:	607 46D Phase	02	Date: _~	5-27-16	Sampled By:	Den	oppeng	26
): MWOOL			Pump Bailer							
Pump (Make & l	Model):		Purge	e Rate: gpn	1 Water Quality	Meter (Mak	e & Model)		Water Le	vel Meter:	
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	of Pump or Inte	nke Tubing:		_ft BTOC
Depth to Water:	ft I	BTOC Total We	ll Depth:	ft BLS Sc Well Volum	reen Interval; ne = (Total Well Deptl	n - Depth to Wat	er) × Well Capacity [Well C	ameter:	in well vo	1; 2" = 0.163; 4" =	0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start										
				70	-						
						1					
	-				 						
				1							
stabil 2. When paran 3. Three conde 4. For hig avails 5. If DO samp mg/L	ization parameter purging a well wit neter measurement consecutive measurement that the properties of the DO and/or Turbable). All attempts and/or turbidity state or to continue professional to the professional continue professional continue professional transfer and the professional transfer and	measurements no h partially subme ts no sooner than 2 urements of the reading; DO is no oidity, check flow s should be made abilization param purging five volum er is greater; and t	sooner than rged well so 2 minutes aprive stabilized greater than through cell to get the patter limits comes of the sourbidity ± 5 gal/ft × Tubi	in the well screen, pu 2 minutes apart; must preen, purge minimum art, must purge minimum ation parameters listed a 20% saturation at fiel I for air bubbles – this rameters within the spe annot be met (temp, p creened interval; altern NTUs or 10%, whiche	of one well volu- um of three equipal, must be within d measured temporary be causing the ecified limits. Verall, conductivity that it is stabilization wer is greater.	of three equipme prior to coment volume in the stated erature; and the erroneous rearify initial caranges remain parameter l	ment volumes prior to collecting first stabilizes prior to collecting s limits for sampling: urbidity ≤ 20 NTUs. adings. Turbidity shoulibration on water quan within limits), the simits after purging fi	ation paramete ample. temperature: ald be verified dity meters was sampling team we volumes of	±0.2 °C; pH: visually and wit s performed corr leader may deci the screened int	±0.2 standard h a separate tur ectly before uside whether or erval are as fol	nal stabilization units; specific bidity meter (if ing again. not to collect a lows: DO \pm 0.2
[Tubing Inner I	Diameter Capacity	Factors: $1/8'' = 0$.0006; 1/4" =	= 0.0026]			VOC				
	ES-WINDIS	30-11195-7	016052	7 Time Collected:	1110	Comments	· VOL	7			

Monitoring V	Vell Sampling		^	_	10				2	-	
Site: VAB	LTM	Project N	Io.: FRO	746D Phase	:	Date:	5-27-16	Sampled By	Ben C	appeng	4
Station (Well ID)	m woo!	19 I PU	urge Method	: Pump Bailer	☐ Pump Typ	oe: Subm	nersible (Teflon	SSOther)	Peristaltic	Centrifuga	al Bladder
				e Rate: gpn							
Time @ Start of	Purging:	Time	@ End of P	urging:	Total Purging	Time:	min. Depth o	of Pump or Inta	ake Tubing:		ft BTOC
Depth to Water:	ft I	BTOC Total We	ell Depth:	ft BLS So Well Volun	creen Interval:	S-ZS 1- Depth to Wat	ft BLS Well dia er) × Well Capacity [Well C	meter:	in Well Vo	olume: 1: 2" = 0.163; 4" =	gal 0.653; 6" = 1.469]
Time	Cumulative Purge Volume (gal)	Temp (°C)	pН	Conductivity (mS/cm)	Turbidity (NTU)	Salinity (%)	ORP (mV)	DO (mg/L)	TDS (g/L)	Color	Comments
	Start									-	
						5					
				1							
				7		 					
				1	V						
			•								
stabili 2. When p param 3. Three c condu 4. For high availa 5. If DO a sampl mg/L	zation parameter in urging a well with eter measurement consecutive measurement etance: ±5.0% of a DO and/or Turbible). All attempts and/or turbidity state or to continue pror 10%, whichever	measurements no h partially subme is no sooner than a trements of the freading; DO is no idity, check flow is should be made abilization param ourging five volumer is greater; and to	sooner than rged well so 2 minutes ap five stabilize o greater than through cell to get the pareter limits comes of the sourbidity ± 5	in the well screen, pu 2 minutes apart; must preen, purge minimum art, must purge minimum attion parameters listed a 20% saturation at fiel I for air bubbles – this rameters within the spe annot be met (temp, p preened interval; altern NTUs or 10%, whiche	purge minimum of of one well volument of three equipals, must be within deciried temporary be causing excified limits. Verified limits. Verified the stabilization ver is greater.	of three equipme prior to coment volume in the stated erature; and the terroneous rearify initial calcanges remain parameter 1	ment volumes prior to ollecting first stabilizates prior to collecting salimits for sampling: urbidity ≤ 20 NTUs, dings. Turbidity shou libration on water quain within limits), the salimits after purging five	temperature: ld be verified lity meters was ampling team we volumes of	r measurements. ±0.2 °C; pH: visually and with sperformed correleader may decithe screened into	±0.2 standard the a separate tur- ectly before using de whether or erval are as follows:	nal stabilization units; specific bidity meter (if ng again, not to collect a lows: DO \pm 0.2
Equipment Volu [Tubing Inner D	ume = (Tubing Ca Diameter Capacity	pacity $\underline{}$ Factors: $1/8'' = 0$	gal/ft × Tubii .0006; 1/4" =	ng Length ft = 0.0026]) + (Flow Throug	h Cell Volun			s [3 × Equip. V	ol =	gal]
Sample ID	E5-MW001	9I-018.0-	2016052	7 Time Collected:	1120	Comments:	VOCS				

APPENDIX C

LABORATORY ANALYTICAL REPORTS

(IN ELECTRONIC COPY ONLY)



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola 3355 McLemore Drive Pensacola, FL 32514 Tel: (850)474-1001

TestAmerica Job ID: 400-122302-1 Client Project/Site: VAB-LTM

For:

Geosyntec Consultants, Inc. 316 South Baylen Street Suite 201 Pensacola, Florida 32502

Attn: Crystal Towns

Mark Swafford

Authorized for release by: 6/9/2016 3:17:47 PM

Mark Swafford, Project Manager I (850)474-1001

mark.swafford@testamericainc.com

·····LINKS ······

Review your project results through
Total Access

Have a Question?



Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
Motale	

Metals	
Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)

ML	Minimum Level
NC	Not Calculated

ND Not detected at the reporting limit (or MDL or EDL if shown)

PQL **Practical Quantitation Limit**

QC **Quality Control** RER Relative error ratio

RLReporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) TEQ

Case Narrative

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Job ID: 400-122302-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-122302-1

Comments

No additional comments.

Receipt

The samples were received on 5/28/2016 9:48 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.7° C and 0.9° C.

Receipt Exceptions

A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC).

The sample collection date and time listed on the COC is incorrect for the following samples:. C5ES-MW0012S-012.5-20160527 (400-122302-2), C5ES-MW0012I-022.5-20160527 (400-122302-3), C5ES-MW0017S-009.5-20160527 (400-122302-4), C5ES-MW0018S-009.5-20160527 (400-122302-5) and C5ES-MW0019I-018.0-20160527 (400-122302-6). The dates and times logged in are what were listed on the sample vials.

Sample PRES-IW0007-034.5-20160525 listed on the COC is incorrect. Per client the ID should be PRES-IW0007I-20160525.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-2

Lab Sample ID: 400-122302-3

Lab Sample ID: 400-122302-4

Lab Sample ID: 400-122302-5

Lab Sample ID: 400-122302-6

Lab Sample ID: 400-122302-7

Lab Sample ID: 400-122302-8

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Client Sample ID: C5ES-MW0010I-022.5-20160527	Lab Sample ID: 400-122302-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11	Ī	25	10	ug/L		_	8260B	Total/NA
Carbon disulfide	1.3		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: C5ES-MW0012S-012.5-20160527

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3-Dichlorobenzene	0.99	I	1.0	0.54	ug/L		_	8260B	Total/NA
1,4-Dichlorobenzene	2.6		1.0	0.64	ug/L	1		8260B	Total/NA
Acetone	25		25	10	ug/L	1		8260B	Total/NA
Carbon disulfide	0.75	l	1.0	0.50	ug/L	1		8260B	Total/NA
Chlorobenzene	4.1		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: C5ES-MW0012I-022.5-20160527

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	0.65	I	1.0	0.50	ug/L	1	_	8260B	Total/NA
trans-1,2-Dichloroethene	0.65	Ì	1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: C5ES-MW0017S-009.5-20160527

Analyte	Result Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3-Dichlorobenzene	3.9	1.0	0.54	ug/L	1	_	8260B	Total/NA
1,4-Dichlorobenzene	5.6	1.0	0.64	ug/L	1		8260B	Total/NA
Chlorobenzene	0.95 I	1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: C5ES-MW0018S-009.5-20160527

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone		Ī	25	10	ug/L		_	8260B	Total/NA
Carbon disulfide	0.81	1	1.0	0.50	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	1.7		1.0	0.50	ug/L	1		8260B	Total/NA
Vinyl chloride	23		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: C5ES-MW0019I-018.0-20160527

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D	Method	Prep Type
trans-1,2-Dichloroethene	1.7	1.0	0.50 ug/L		8260B	Total/NA
Vinyl chloride	29	1.0	0.50 ug/L	1	8260B	Total/NA

Client Sample ID: SFOC-IW0001S-008.5-20160524

_					
Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Antimony - RA	21	2.5	0.85 ug/L	5 200.8	Total/NA

Client Sample ID: SFOC-IW0004S-007.5-20160524

No Detections.

Client Sample ID: MLPV-IW0006IR-030.5-20160526	Lab Sample ID: 400-122302-9

This Detection Summary does not include radiochemical test results.

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-10

Lab Sample ID: 400-122302-11

Lab Sample ID: 400-122302-12

Lab Sample ID: 400-122302-13

Lab Sample ID: 400-122302-14

Lab Sample ID: 400-122302-15

Lab Sample ID: 400-122302-16

Lab Sample ID: 400-122302-17

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Client Sample ID: MLPV-IW0006IR-030.5-20160526 (Continued) Lab Sample ID: 400-12230	Client Sample ID: MLPV-IW0006IR-030.5-20160526	(Continued) Lab Sa	mple ID: 400-122302-9
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Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D Method	Prep Type
Acetone	18	I	25	10	ug/L	1	8260B	Total/NA
Carbon disulfide	0.51	I	1.0	0.50	ug/L	1	8260B	Total/NA

Client Sample ID: MLPV-IW0009I-030.5-20160526

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Acetone	21 I	25	10 ug/L	18260B	Total/NA

Client Sample ID: MLPV-IW0009D-047.5-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	13	Ī	25	10	ug/L	1	_	8260B	Total/NA

Client Sample ID: MLPV-IW0012I-037.5-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18	Ī	25	10	ug/L	1	_	8260B	Total/NA
Carbon disulfide	0.57	1	1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: MLPV-IW0012D-047.5-20160526

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Acetone	13 I	25	10 ug/L	1 8260B	Total/NA

Client Sample ID: MLPV-IW0018D-052.5-20160525

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Acetone	12 I	25	10 ug/L	1 8260B	Total/NA

Client Sample ID: MLPV-IW0028I-030.5-20160526

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Acetone	20 I	25	10 ug/L	1 8260B	Total/NA
Vinyl chloride	4.0	1.0	0.50 ug/L	1 8260B	Total/NA

Client Sample ID: MLPV-IW0029D-044.5-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	29		25	10	ug/L	1	_	8260B	Total/NA
Carbon disulfide	0.51	I	1.0	0.50	ug/L	1		8260B	Total/NA
Vinyl chloride	27		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: MLPV-IW0046-040.0-20160526

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D	Method	Prep Type
Acetone	10 I	25	10 ug/L		8260B	Total/NA
Vinyl chloride	8.1	1.0	0.50 ug/L	1	8260B	Total/NA

Client Sample ID: MLPV-IW0047-040.0-20160526

Lab Sample ID: 400-122302-18

No Detections.

This Detection Summary does not include radiochemical test results.

6

TestAmerica Job ID: 400-122302-1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Client Sample ID: MLPV-IW0048-045.0-20160526 Lab Sample ID: 400-122302-19

No Detections.

Client Sample ID: MLPV-IW0049-043.0-20160525 Lab Sample ID: 400-122302-20

	Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
	Acetone	24	I	25	10	ug/L	1	_	8260B	 Total/NA
l	Carbon disulfide	1.1		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: MLPV-IW0050-045.0-20160525 Lab Sample ID: 400-122302-21

No Detections.

Client Sample ID: MLPV-IW0051-050.0-20160525 Lab Sample ID: 400-122302-22

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Carbon disulfide	0.68 I	1.0	0.50 ug/L	1 8260B	Total/NA

Client Sample ID: MLPV-IW0052-045.0-20160526 Lab Sample ID: 400-122302-23

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	0.67	I	1.0	0.50	ug/L	1	_	8260B	Total/NA
Vinyl chloride	79		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: MLPV-IW0053-040.0-20160526 Lab Sample ID: 400-122302-24

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D	Method	Prep Type
cis-1,2-Dichloroethene	4.0	1.0	0.50 ug/L		8260B	Total/NA
trans-1,2-Dichloroethene	0.60 I	1.0	0.50 ug/L	1	8260B	Total/NA
Vinyl chloride	52	1.0	0.50 ug/L	1	8260B	Total/NA

Analyte	Result Qualifie		MDL Unit	Dil Fac	Method	Prep Type
Acetone	15 I	25	10 ug/L		8260B	Total/NA

Client Sample ID: MPLV-IW0055-045.0-20160525 Lab Sample ID: 400-122302-26

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Acetone	20 I	25	10 ug/L	1 8260B	Total/NA

Client Sample ID: MPLV-IW0056-035.0-20160525 Lab Sample ID: 400-122302-27

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Carbon disulfide	1.0	1.0	0.50 ug/L	1	Total/NA

Client Sample ID: PCCA-MW0004-010.0-20160525 Lab Sample ID: 400-122302-28

No Detections.

Client Sample ID: PCCA-MW0017-020.0-20160525 Lab Sample ID: 400-122302-29

This Detection Summary does not include radiochemical test results.

2

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Lab Sample ID: 400-122302-29

Lab Sample ID: 400-122302-33

Lab Sample ID: 400-122302-34

Lab Sample ID: 400-122302-35

Lab Sample ID: 400-122302-36

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	14	I	25	10	ug/L		_	8260B	Total/NA
Carbon disulfide	0.92	1	1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: PRES-IW0007I-034.5-20160525 Lab Sample ID: 400-122302-30

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16	I	25	10	ug/L	1	_	8260B	Total/NA
Carbon disulfide	1.8		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: PRES-IW0009-045.0-20160525 Lab Sample ID: 400-122302-31

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11	Ī	25	10	ug/L	1	_	8260B	Total/NA
Carbon disulfide	0.52	1	1.0	0.50	ug/L	1		8260B	Total/NA

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Acetone	11 I	25	10 ug/L	1 8260B	Total/NA

Client Sample ID: SATV-IW0009I-024.5-20160525

Client Sample ID: PCCA-MW0017-020.0-20160525 (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11	I	25	10	ug/L		_	8260B	Total/NA
Carbon disulfide	0.98	I	1.0	0.50	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	2.7		1.0	0.50	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	2.7		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: SATV-IW00010-040.0-20160525

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Carbon disulfide	0.72 I	1.0	0.50 ug/L	1	Total/NA

Client Sample ID: WCPS-IW0001SR-007.5-20160526

Analyte	Result C	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	12 I		25	10	ug/L	1	_	8260B	Total/NA
Carbon disulfide	0.62 I		1.0	0.50	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	9.0		1.0	0.50	ug/L	1		8260B	Total/NA
Vinyl chloride	28		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: WCPS-IW0016-020.0-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	17		25	10	ug/L	1	_	8260B	Total/NA
Carbon disulfide	0.93	1	1.0	0.50	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	6.0		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: MLPV-SAMW0001-045.5-20160524

Lab Sample ID: 400-122302-37

This Detection Summary does not include radiochemical test results.

Lab Sample ID: 400-122302-40

Lab Sample ID: 400-122302-41

Lab Sample ID: 400-122302-42

Lab Sample ID: 400-122302-43

Lab Sample ID: 400-122302-44

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Client Sample ID: MLPV-SAMW0001-045.5-20160524	Lab Sample ID: 400-122302-37
(Continued)	

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Carbon disulfide	4.7	1.0	0.50 ug/L	1 8260B	Total/NA

Client Sample ID: MLPV-SAMW0003-045.5-20160524 Lab Sample ID: 400-122302-38

Analyte	Result Qualifier	PQL	MDL	Unit	Dil Fac	D Method	Prep Type
Carbon disulfide	1.2	1.0	0.50	ug/L	1	8260B	Total/NA
cis-1,2-Dichloroethene	86	1.0	0.50	ug/L	1	8260B	Total/NA
lodomethane	0.73 I	1.0	0.68	ug/L	1	8260B	Total/NA
trans-1,2-Dichloroethene	3.9	1.0	0.50	ug/L	1	8260B	Total/NA
Vinyl chloride	80	1.0	0.50	ug/L	1	8260B	Total/NA

Client Sample ID: FS6-MW0001-030.0-20160525 Lab Sample ID: 400-122302-39

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
cis-1,2-Dichloroethene	2.6	1.0	0.50 ug/L	1 8260B	Total/NA

Client Sample ID: FS6-MW0003-025.0-20160525

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Acetone	12 I	25	10 ug/L	1 8260B	Total/NA

Client Sample ID: FDTL-IW0007I-015.0-20160526

Analyte	Result Qualifier	PQL	MDL	Unit	Dil Fac I) Method	Prep Type
cis-1,2-Dichloroethene	8.0	1.0	0.50	ug/L		8260B	Total/NA
Trichloroethene	3.0	1.0	0.50	ug/L	1	8260B	Total/NA

Client Sample ID: FDTL-IW0008I-015.0-20160526

Analyte	Result Q	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	14 I		25	10	ug/L	1	_	8260B	Total/NA
cis-1,2-Dichloroethene	16		1.0	0.50	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	1.3		1.0	0.50	ug/L	1		8260B	Total/NA
Trichloroethene	0.82 I		1.0	0.50	ug/L	1		8260B	Total/NA
Vinyl chloride	15		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: FDTL-IW0009I-015.0-20160526

 Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D	Method	Prep Type
Acetone	13 I	25	10 ug/L		8260B	Total/NA
cis-1,2-Dichloroethene	15	1.0	0.50 ug/L	1	8260B	Total/NA
Trichloroethene	5.0	1.0	0.50 ug/L	1	8260B	Total/NA
Vinyl chloride	1.5	1.0	0.50 ug/L	1	8260B	Total/NA

Client Sample ID: FDTL-IW0013I-015.0-20160526

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
cis-1,2-Dichloroethene	23	1.0	0.50 ug/L	1 8260B	Total/NA
trans-1,2-Dichloroethene	4.4	1.0	0.50 ug/L	1 8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Client Sample ID: FDTL-IW0014I-015.0-20160526

Lab Sample ID: 400-122302-45

No Detections.

Client Sample ID: FDTL-IW0015S-010.0-20160526 Lab Sample ID: 400-122302-46

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.58	Ī	1.0	0.50	ug/L	1	_	8260B	 Total/NA
Vinyl chloride	15		1.0	0.50	ug/L	1		8260B	Total/NA

Analyte	Result Qualifier	PQL	MDL Unit	Dil Fac D Method	Prep Type
Trichloroethene	4.2	1.0	0.50 ug/L	1	Total/NA

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
trans-1,2-Dichloroethene	1.0		1.0	0.50	ug/L	1	_	8260B	Total/NA
Vinyl chloride	62		1.0	0.50	ug/L	1		8260B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-122302-49

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: Geosyntec Consultants, Inc. Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

eceived	
8/16 09:48	
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8/16 09:48	
8/16 09:48	

Lab Sample ID	Client Sample ID	Matrix	Collected Receive	d
400-122302-1	C5ES-MW0010I-022.5-20160527	Water	05/27/16 11:00 05/28/16 09	9:48
400-122302-2	C5ES-MW0012S-012.5-20160527	Water	05/27/16 11:30 05/28/16 09	9:48
400-122302-3	C5ES-MW0012I-022.5-20160527	Water	05/27/16 11:25 05/28/16 09	9:48
400-122302-4	C5ES-MW0017S-009.5-20160527	Water	05/27/16 11:15 05/28/16 09	9:48
400-122302-5	C5ES-MW0018S-009.5-20160527	Water	05/27/16 11:10 05/28/16 09	9:48
400-122302-6	C5ES-MW0019I-018.0-20160527	Water	05/27/16 11:20 05/28/16 09	9:48
400-122302-7	SFOC-IW0001S-008.5-20160524	Water	05/24/16 10:59 05/28/16 09	9:48
400-122302-8	SFOC-IW0004S-007.5-20160524	Water	05/24/16 10:08 05/28/16 09	9:48
400-122302-9	MLPV-IW0006IR-030.5-20160526	Water	05/26/16 09:50 05/28/16 09	9:48
400-122302-10	MLPV-IW0009I-030.5-20160526	Water	05/26/16 10:10 05/28/16 09	9:48
400-122302-11	MLPV-IW0009D-047.5-20160526	Water	05/26/16 10:15 05/28/16 09	9:48
400-122302-12	MLPV-IW0012I-037.5-20160526	Water	05/26/16 10:35 05/28/16 09	9:48
400-122302-13	MLPV-IW0012D-047.5-20160526	Water	05/26/16 10:40 05/28/16 09	9:48
400-122302-14	MLPV-IW0018D-052.5-20160525	Water	05/25/16 14:43 05/28/16 09	9:48
400-122302-15	MLPV-IW0028I-030.5-20160526	Water	05/26/16 11:00 05/28/16 09	9:48
400-122302-16	MLPV-IW0029D-044.5-20160526	Water	05/26/16 10:50 05/28/16 09	9:48
400-122302-17	MLPV-IW0046-040.0-20160526	Water	05/26/16 10:55 05/28/16 09	9:48
400-122302-18	MLPV-IW0047-040.0-20160526	Water	05/26/16 11:10 05/28/16 09	9:48
400-122302-19	MLPV-IW0048-045.0-20160526	Water	05/26/16 11:25 05/28/16 09	9:48
400-122302-20	MLPV-IW0049-043.0-20160525	Water	05/25/16 14:34 05/28/16 09	9:48
400-122302-21	MLPV-IW0050-045.0-20160525	Water	05/25/16 14:58 05/28/16 09	9:48
400-122302-22	MLPV-IW0051-050.0-20160525	Water	05/25/16 15:10 05/28/16 09	9:48
400-122302-23	MLPV-IW0052-045.0-20160526	Water	05/26/16 11:55 05/28/16 09	9:48
400-122302-24	MLPV-IW0053-040.0-20160526	Water	05/26/16 10:20 05/28/16 09	9:48
400-122302-25	MPLV-IW0054-045.0-20160526	Water	05/26/16 11:20 05/28/16 09	9:48
400-122302-26	MPLV-IW0055-045.0-20160525	Water	05/25/16 16:08 05/28/16 09	9:48
400-122302-27	MPLV-IW0056-035.0-20160525	Water	05/25/16 14:21 05/28/16 09	9:48
400-122302-28	PCCA-MW0004-010.0-20160525	Water	05/25/16 15:48 05/28/16 09	9:48
400-122302-29	PCCA-MW0017-020.0-20160525	Water	05/25/16 15:56 05/28/16 09	9:48
400-122302-30	PRES-IW0007I-034.5-20160525	Water	05/25/16 14:07 05/28/16 09	
400-122302-31	PRES-IW0009-045.0-20160525	Water	05/25/16 11:45 05/28/16 09	9:48
400-122302-32	PRES-IW0010-045.0-20160525	Water	05/25/16 13:53 05/28/16 09	
400-122302-33	SATV-IW0009I-024.5-20160525	Water	05/25/16 15:28 05/28/16 09	
400-122302-34	SATV-IW00010-040.0-20160525	Water	05/25/16 15:40 05/28/16 09	
400-122302-35	WCPS-IW0001SR-007.5-20160526	Water	05/26/16 11:45 05/28/16 09	
400-122302-36	WCPS-IW0016-020.0-20160526	Water	05/26/16 11:40 05/28/16 09	
400-122302-37	MLPV-SAMW0001-045.5-20160524	Water	05/24/16 11:55 05/28/16 09	
400-122302-38	MLPV-SAMW0003-045.5-20160524	Water	05/24/16 13:19 05/28/16 09	
400-122302-39	FS6-MW0001-030.0-20160525	Water	05/25/16 10:03 05/28/16 09	
400-122302-40	FS6-MW0003-025.0-20160525	Water	05/25/16 10:24 05/28/16 09	
400-122302-41	FDTL-IW0007I-015.0-20160526	Water	05/26/16 13:15 05/28/16 09	
400-122302-42	FDTL-IW0008I-015.0-20160526	Water	05/26/16 13:35 05/28/16 09	
400-122302-43	FDTL-IW0009I-015.0-20160526	Water	05/26/16 13:05 05/28/16 09	
400-122302-44	FDTL-IW0013I-015.0-20160526	Water	05/26/16 14:05 05/28/16 09	
400-122302-45	FDTL-IW0014I-015.0-20160526	Water	05/26/16 14:00 05/28/16 09	
400-122302-46	FDTL-IW0015S-010.0-20160526	Water	05/26/16 13:20 05/28/16 09	
400-122302-47	FDTL-IW0017I-015.0-20160526	Water	05/26/16 14:15 05/28/16 09	
400-122302-48	FDTL-IW0019I-015.0-20160526	Water	05/26/16 13:30 05/28/16 09	
400-122302-49	TRIP BLANK	Water	05/28/16 00:00 05/28/16 09	9:48

Client: Geosyntec Consultants, Inc.

Date Collected: 05/27/16 11:00

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-1

Matrix: Water

Date Received:	05/28/16 09:48	

Client Sample ID: C5ES-MW0010I-022.5-20160527

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52		1.0			— <u> </u>		06/04/16 12:50	
1,1,1-Trichloroethane	0.50		1.0		ug/L			06/04/16 12:50	
1,1,2,2-Tetrachloroethane	0.50		1.0	0.50	-			06/04/16 12:50	
1,1,2-Trichloroethane	0.50		5.0		ug/L			06/04/16 12:50	· · · · · .
1,1-Dichloroethane	0.50		1.0	0.50	-			06/04/16 12:50	
1,1-Dichloroethene	0.50		1.0	0.50	-			06/04/16 12:50	
1,1-Dichloropropene	0.50		1.0	0.50	-			06/04/16 12:50	
1,2,3-Trichlorobenzene	0.70		1.0	0.70				06/04/16 12:50	
1,2,3-Trichloropropane	0.84		5.0	0.84	-			06/04/16 12:50	
1,2,4-Trichlorobenzene	0.82		1.0	0.82	-			06/04/16 12:50	
1,2,4-Trimethylbenzene	0.82		1.0	0.82				06/04/16 12:50	
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/04/16 12:50	
1,2-Dichlorobenzene	0.50		1.0	0.50				06/04/16 12:50	
<i>'</i>	0.50				-				
1,2-Dichloroethane	0.50		1.0 1.0	0.50 0.50	-			06/04/16 12:50 06/04/16 12:50	
1,2-Dichloropropane	0.50		1.0		ug/L ug/L			06/04/16 12:50	
1,3,5-Trimethylbenzene	0.56				-				
1,3-Dichlorobenzene			1.0	0.54	-			06/04/16 12:50	
1,3-Dichloropropane	0.50		1.0	0.50	-			06/04/16 12:50	
1,4-Dichlorobenzene	0.64		1.0	0.64				06/04/16 12:50	•
2,2-Dichloropropane	0.50		1.0	0.50	-			06/04/16 12:50	•
2-Chlorotoluene	0.57		1.0	0.57	-			06/04/16 12:50	
2-Hexanone	3.1		25		ug/L			06/04/16 12:50	•
4-Chlorotoluene	0.56		1.0		ug/L			06/04/16 12:50	•
Acetone	11		25		ug/L			06/04/16 12:50	
Benzene	0.38	U	1.0	0.38	ug/L			06/04/16 12:50	
Bromobenzene	0.54		1.0	0.54	-			06/04/16 12:50	
Bromochloromethane	0.52		1.0	0.52	-			06/04/16 12:50	
Bromodichloromethane	0.50	U	1.0	0.50	ug/L			06/04/16 12:50	•
Bromoform	0.71		5.0	0.71	-			06/04/16 12:50	
Bromomethane	0.98	U	1.0	0.98	ug/L			06/04/16 12:50	•
Carbon disulfide	1.3		1.0		ug/L			06/04/16 12:50	
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			06/04/16 12:50	•
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 12:50	
Chloroethane	0.76	U	1.0	0.76	ug/L			06/04/16 12:50	
Chloroform	0.60	U	1.0	0.60	ug/L			06/04/16 12:50	
Chloromethane	0.83	U	1.0	0.83	ug/L			06/04/16 12:50	
cis-1,2-Dichloroethene	0.50	U	1.0		ug/L			06/04/16 12:50	· · · · · · · .
cis-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 12:50	
Dibromochloromethane	0.50	U	1.0		ug/L			06/04/16 12:50	
Dibromomethane	0.59		5.0		ug/L			06/04/16 12:50	· · · · · · · · ·
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 12:50	
Ethylbenzene	0.50		1.0		ug/L			06/04/16 12:50	
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 12:50	
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 12:50	
lodomethane	0.68		1.0		ug/L			06/04/16 12:50	
sopropyl ether	0.70		1.0		ug/L			06/04/16 12:50	· · · · · .
Isopropylbenzene	0.70		1.0		ug/L			06/04/16 12:50	
Methyl Ethyl Ketone	2.6		25		ug/L ug/L			06/04/16 12:50	
methyl isobutyl ketone	1.8		25 25		ug/L ug/L			06/04/16 12:50	· · · · · .

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-1

Client Sample ID: C5ES-MW0010I-022.5-20160527 Date Collected: 05/27/16 11:00

Matrix: Water

Date Received:	05/28/16 09:48	
Date Neceived.	03/20/10 03.40	

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 12:50	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 12:50	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 12:50	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 12:50	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 12:50	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 12:50	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 12:50	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 12:50	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 12:50	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 12:50	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 12:50	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 12:50	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 12:50	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 12:50	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 12:50	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 12:50	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 12:50	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 12:50	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 12:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		78 - 118			-		06/04/16 12:50	1
Dibromofluoromethane	95		81 - 121					06/04/16 12:50	1
Toluene-d8 (Surr)	100		80 - 120					06/04/16 12:50	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/27/16 11:30

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-2

Matrix: Water

Date Received: 05/28/16 09:48

Client Sample ID: C5ES-MW0012S-012.5-20160527

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 13:15	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 13:15	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 13:15	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 13:15	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 13:15	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 13:15	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 13:15	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
1,2-Dichloroethane	0.50	U	1.0	0.50				06/04/16 13:15	1
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/04/16 13:15	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/04/16 13:15	1
1,3-Dichlorobenzene	0.99	1	1.0	0.54	-			06/04/16 13:15	1
1,3-Dichloropropane	0.50		1.0	0.50	-			06/04/16 13:15	1
1,4-Dichlorobenzene	2.6		1.0	0.64	ū			06/04/16 13:15	1
2,2-Dichloropropane	0.50	U	1.0	0.50	-			06/04/16 13:15	1
2-Chlorotoluene	0.57		1.0	0.57	-			06/04/16 13:15	1
2-Hexanone	3.1		25		ug/L			06/04/16 13:15	
4-Chlorotoluene	0.56		1.0	0.56	-			06/04/16 13:15	1
Acetone	25		25		ug/L			06/04/16 13:15	1
Benzene	0.38		1.0	0.38				06/04/16 13:15	
Bromobenzene	0.54		1.0	0.54	-			06/04/16 13:15	1
Bromochloromethane	0.52		1.0	0.52	-			06/04/16 13:15	1
Bromodichloromethane	0.50		1.0	0.50	-			06/04/16 13:15	1
Bromoform	0.71		5.0	0.71	-			06/04/16 13:15	1
Bromomethane	0.98		1.0	0.98	•			06/04/16 13:15	1
Carbon disulfide	0.75		1.0	0.50	-			06/04/16 13:15	
Carbon tetrachloride	0.73		1.0	0.50	-			06/04/16 13:15	1
Chlorobenzene	4.1	J	1.0	0.50	_			06/04/16 13:15	1
Chloroethane	0.76		1.0		ug/L			06/04/16 13:15	
Chloroform	0.60		1.0		ug/L ug/L			06/04/16 13:15	1
					-				
Chloromethane	0.83		1.0	0.83				06/04/16 13:15	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 13:15	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 13:15	1
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 13:15	
Dibromomethane	0.59		5.0		ug/L			06/04/16 13:15	1
Dichlorodifluoromethane	0.85		1.0	0.85	-			06/04/16 13:15	1
Ethylbenzene	0.50		1.0		ug/L			06/04/16 13:15	1
Ethylene Dibromide	0.50		1.0	0.50				06/04/16 13:15	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 13:15	1
odomethane	0.68		1.0	0.68				06/04/16 13:15	1
sopropyl ether	0.70		1.0		ug/L			06/04/16 13:15	1
Isopropylbenzene	0.53		1.0	0.53	-			06/04/16 13:15	1
Methyl Ethyl Ketone methyl isobutyl ketone	2.6 1.8		25 25		ug/L ug/L			06/04/16 13:15 06/04/16 13:15	1 1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-2

Matrix: Water

Date Collected: 05/27/16 11:30	
Date Received: 05/28/16 09:48	

Client Sample ID: C5ES-MW0012S-012.5-20160527

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 13:15	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 13:15	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 13:15	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 13:15	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 13:15	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 13:15	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 13:15	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 13:15	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 13:15	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 13:15	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 13:15	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 13:15	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 13:15	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 13:15	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 13:15	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 13:15	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 13:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		78 - 118			-		06/04/16 13:15	1
Dibromofluoromethane	94		81 - 121					06/04/16 13:15	1
Toluene-d8 (Surr)	103		80 - 120					06/04/16 13:15	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Iodomethane

Isopropyl ether

Isopropylbenzene

Methyl Ethyl Ketone

methyl isobutyl ketone

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-3

Matrix: Water

Client Sample ID: C5ES-MW0012I-022.5-20160527 Date Collected: 05/27/16 11:25 Date Received: 05/28/16 09:48

Method: 8260B - Volatile Organic Compounds (GC/MS) PQL Dil Fac Result Qualifier **MDL** Unit D Analyte Prepared Analyzed 0.52 U 0.52 06/04/16 13:39 1,1,1,2-Tetrachloroethane 1.0 ug/L 0.50 U 1.1.1-Trichloroethane 1.0 06/04/16 13:39 0.50 ug/L 1 1,1,2,2-Tetrachloroethane 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 0.50 U 5.0 0.50 ug/L 1.1.2-Trichloroethane 06/04/16 13:39 1,1-Dichloroethane 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 1,1-Dichloroethene 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 1 1,1-Dichloropropene 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 1,2,3-Trichlorobenzene 0.70 U 1.0 0.70 ug/L 06/04/16 13:39 1,2,3-Trichloropropane 0.84 U 5.0 0.84 ug/L 06/04/16 13:39 1 1,2,4-Trichlorobenzene 0.82 U 1.0 0.82 ug/L 06/04/16 13:39 1,2,4-Trimethylbenzene 0.82 U 1.0 0.82 ug/L 06/04/16 13:39 1,2-Dibromo-3-Chloropropane 1.5 U 5.0 1.5 ug/L 06/04/16 13:39 0.50 U 1.0 0.50 ug/L 1.2-Dichlorobenzene 06/04/16 13:39 1,2-Dichloroethane 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 0.50 1,2-Dichloropropane 0.50 U 1.0 ug/L 06/04/16 13:39 1,3,5-Trimethylbenzene 0.56 U 1.0 0.56 06/04/16 13:39 ug/L 1,3-Dichlorobenzene 0.54 U 10 0.54 ug/L 06/04/16 13:39 1,3-Dichloropropane 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 0.64 U 1.0 1,4-Dichlorobenzene 0.64 ug/L 06/04/16 13:39 2,2-Dichloropropane 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 2-Chlorotoluene 0.57 U 0.57 ug/L 1.0 06/04/16 13:39 25 2-Hexanone 3.1 U 3.1 ug/L 06/04/16 13:39 4-Chlorotoluene 0.56 U 1.0 0.56 06/04/16 13:39 ug/L Acetone 10 U 25 10 ug/L 06/04/16 13:39 Benzene 0.38 U 1.0 0.38 ug/L 06/04/16 13:39 Bromobenzene 0.54 U 1.0 0.54 ug/L 06/04/16 13:39 Bromochloromethane 0.52 U 1.0 0.52 ug/L 06/04/16 13:39 Bromodichloromethane 06/04/16 13:39 0.50 U 1.0 0.50 ug/L Bromoform 0.71 U 5.0 0.71 ug/L 06/04/16 13:39 Bromomethane 0.98 U 1.0 0.98 ug/L 06/04/16 13:39 Carbon disulfide 0.65 I 1.0 0.50 ug/L 06/04/16 13:39 0.50 Carbon tetrachloride 0.50 U 1.0 ug/L 06/04/16 13:39 Chlorobenzene 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 Chloroethane 0.76 U 1.0 0.76 ug/L 06/04/16 13:39 Chloroform 0.60 0.60 U 1.0 ug/L 06/04/16 13:39 Chloromethane 0.83 U 1.0 0.83 ug/L 06/04/16 13:39 0.50 U cis-1,2-Dichloroethene 1.0 0.50 ug/L 06/04/16 13:39 cis-1,3-Dichloropropene 0.50 U 5.0 0.50 ug/L 06/04/16 13:39 Dibromochloromethane 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 Dibromomethane 0.59 U 5.0 0.59 ug/L 06/04/16 13:39 Dichlorodifluoromethane 0.85 U 1.0 0.85 06/04/16 13:39 ug/L Ethylbenzene 0.50 U 1.0 0.50 06/04/16 13:39 ug/L Ethylene Dibromide 0.50 U 1.0 0.50 ug/L 06/04/16 13:39 Hexachlorobutadiene 0.90 U 5.0 0.90 ug/L 06/04/16 13:39

TestAmerica Pensacola

06/04/16 13:39

06/04/16 13:39

06/04/16 13:39

06/04/16 13:39

06/04/16 13:39

1.0

1.0

1.0

25

25

0.68 ug/L

0.53 ug/L

0.70 ug/L

2.6 ug/L

1.8 ug/L

0.68 U

0.70 U

0.53 U

2.6 U

1.8 U

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-3

Client Sample ID: C5ES-MW0012I-022.5-20160527 Date Collected: 05/27/16 11:25

Matrix: Water

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 13:39	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 13:39	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 13:39	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 13:39	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 13:39	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 13:39	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 13:39	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 13:39	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 13:39	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 13:39	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 13:39	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 13:39	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 13:39	1
trans-1,2-Dichloroethene	0.65	1	1.0	0.50	ug/L			06/04/16 13:39	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 13:39	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 13:39	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 13:39	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 13:39	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 13:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		78 - 118			-		06/04/16 13:39	1
Dibromofluoromethane	96		81 - 121					06/04/16 13:39	1
Toluene-d8 (Surr)	102		80 - 120					06/04/16 13:39	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/27/16 11:15

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-4

Matrix: Water

	V 1 (III 6 1 6	. (00/110)
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Client Sample ID: C5ES-MW0017S-009.5-20160527

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 08:47	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 08:47	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 08:47	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 08:47	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 08:47	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 08:47	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 08:47	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	
1,2-Dichloroethane	0.50	U	1.0		ug/L			06/05/16 08:47	
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 08:47	
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56				06/05/16 08:47	
1,3-Dichlorobenzene	3.9		1.0	0.54	_			06/05/16 08:47	
1,3-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 08:47	
1,4-Dichlorobenzene	5.6		1.0	0.64				06/05/16 08:47	
2,2-Dichloropropane	0.50	U	1.0	0.50				06/05/16 08:47	
2-Chlorotoluene	0.57		1.0	0.57	-			06/05/16 08:47	
2-Hexanone	3.1		25	3.1	ug/L			06/05/16 08:47	
4-Chlorotoluene	0.56		1.0		ug/L			06/05/16 08:47	
Acetone	10		25		ug/L			06/05/16 08:47	
Benzene	0.38		1.0		ug/L			06/05/16 08:47	
Bromobenzene	0.54		1.0	0.54	-			06/05/16 08:47	
Bromochloromethane	0.52		1.0		ug/L			06/05/16 08:47	
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 08:47	
Bromoform	0.71		5.0		ug/L			06/05/16 08:47	
Bromomethane	0.98		1.0	0.98	-			06/05/16 08:47	
Carbon disulfide	0.50		1.0		ug/L			06/05/16 08:47	
Carbon tetrachloride	0.50		1.0	0.50	-			06/05/16 08:47	
Chlorobenzene	0.95		1.0	0.50	-			06/05/16 08:47	
Chloroethane	0.76		1.0		ug/L			06/05/16 08:47	
Chloroform	0.60		1.0	0.60				06/05/16 08:47	
Chloromethane	0.83		1.0	0.83	-			06/05/16 08:47	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 08:47	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 08:47	
Dibromochloromethane	0.50		1.0		ug/L ug/L			06/05/16 08:47	
Dibromomethane	0.50		5.0		ug/L ug/L			06/05/16 08:47	
Dichlorodifluoromethane	0.85		1.0		ug/L ug/L			06/05/16 08:47	
Ethylbenzene	0.50		1.0		ug/L ug/L			06/05/16 08:47	
Ethylene Dibromide	0.50		1.0		ug/L ug/L			06/05/16 08:47	
•	0.90								
Hexachlorobutadiene lodomethane	0.90		5.0 1.0		ug/L			06/05/16 08:47 06/05/16 08:47	
					ug/L				
Isopropyl ether	0.70		1.0		ug/L			06/05/16 08:47	
Isopropylbenzene	0.53		1.0		ug/L			06/05/16 08:47	
Methyl Ethyl Ketone methyl isobutyl ketone	2.6	U	25 25		ug/L ug/L			06/05/16 08:47 06/05/16 08:47	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-4

Client Sample ID: C5ES-MW0017S-009.5-20160527

Matrix: Water

Date Collected: 05/27/16 11:15 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 08:47	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 08:47	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 08:47	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 08:47	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 08:47	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 08:47	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 08:47	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 08:47	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 08:47	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 08:47	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 08:47	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 08:47	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 08:47	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 08:47	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 08:47	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 08:47	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 08:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		78 - 118			-		06/05/16 08:47	1
Dibromofluoromethane	99		81 - 121					06/05/16 08:47	1
Toluene-d8 (Surr)	98		80 - 120					06/05/16 08:47	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/27/16 11:10

Client Sample ID: C5ES-MW0018S-009.5-20160527

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-5

Matrix: Water

Method: 8260B - Volatile Org			•	BAD!	l lmit	_	D=======	A mal:	DUES
Analyte 1,1,1,2-Tetrachloroethane	0.52	Qualifier	PQL	MDL	ug/L	D	Prepared	Analyzed 06/04/16 14:27	Dil Fac
	0.52		1.0		_			06/04/16 14:27	1
1,1,1-Trichloroethane	0.50		1.0		ug/L				1
1,1,2,2-Tetrachloroethane			1.0		ug/L			06/04/16 14:27	1
1,1,2-Trichloroethane	0.50		5.0		ug/L			06/04/16 14:27	1
1,1-Dichloroethane	0.50		1.0		ug/L			06/04/16 14:27	1
1,1-Dichloroethene	0.50		1.0		ug/L			06/04/16 14:27	1
1,1-Dichloropropene	0.50		1.0		ug/L			06/04/16 14:27	1
1,2,3-Trichlorobenzene	0.70		1.0		ug/L			06/04/16 14:27	1
1,2,3-Trichloropropane	0.84		5.0		ug/L			06/04/16 14:27	
1,2,4-Trichlorobenzene	0.82		1.0		ug/L			06/04/16 14:27	1
1,2,4-Trimethylbenzene	0.82		1.0		ug/L			06/04/16 14:27	1
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/04/16 14:27	
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/04/16 14:27	1
1,2-Dichloroethane	0.50		1.0		ug/L			06/04/16 14:27	1
1,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 14:27	1
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/04/16 14:27	1
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/04/16 14:27	1
1,3-Dichloropropane	0.50		1.0		ug/L			06/04/16 14:27	1
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/04/16 14:27	1
2,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 14:27	1
2-Chlorotoluene	0.57		1.0	0.57	ug/L			06/04/16 14:27	1
2-Hexanone	3.1		25		ug/L			06/04/16 14:27	1
4-Chlorotoluene	0.56	U	1.0		ug/L			06/04/16 14:27	1
Acetone	11	I	25		ug/L			06/04/16 14:27	1
Benzene	0.38	U	1.0		ug/L			06/04/16 14:27	1
Bromobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 14:27	1
Bromochloromethane	0.52	U	1.0	0.52	ug/L			06/04/16 14:27	1
Bromodichloromethane	0.50	U	1.0	0.50	ug/L			06/04/16 14:27	1
Bromoform	0.71	U	5.0	0.71	ug/L			06/04/16 14:27	1
Bromomethane	0.98	U	1.0	0.98	ug/L			06/04/16 14:27	1
Carbon disulfide	0.81	I	1.0	0.50	ug/L			06/04/16 14:27	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			06/04/16 14:27	1
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 14:27	1
Chloroethane	0.76	U	1.0	0.76	ug/L			06/04/16 14:27	1
Chloroform	0.60	U	1.0	0.60	ug/L			06/04/16 14:27	1
Chloromethane	0.83	U	1.0	0.83	ug/L			06/04/16 14:27	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 14:27	1
cis-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 14:27	1
Dibromochloromethane	0.50	U	1.0	0.50	ug/L			06/04/16 14:27	1
Dibromomethane	0.59	U	5.0	0.59	ug/L			06/04/16 14:27	1
Dichlorodifluoromethane	0.85	U	1.0	0.85	ug/L			06/04/16 14:27	1
Ethylbenzene	0.50	U	1.0		ug/L			06/04/16 14:27	1
Ethylene Dibromide	0.50	U	1.0		ug/L			06/04/16 14:27	1
Hexachlorobutadiene	0.90	U	5.0		ug/L			06/04/16 14:27	1
lodomethane	0.68		1.0		ug/L			06/04/16 14:27	1
Isopropyl ether	0.70		1.0		ug/L			06/04/16 14:27	1
Isopropylbenzene	0.53		1.0		ug/L			06/04/16 14:27	1
Methyl Ethyl Ketone	2.6		25		ug/L			06/04/16 14:27	1
methyl isobutyl ketone	1.8		25		ug/L			06/04/16 14:27	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/27/16 11:10

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-5

Matrix: Water

Date Received: 05/28/16 09:48
Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

95

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Client Sample ID: C5ES-MW0018S-009.5-20160527

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 14:27	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 14:27	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 14:27	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 14:27	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 14:27	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 14:27	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 14:27	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 14:27	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 14:27	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 14:27	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 14:27	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 14:27	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 14:27	1
trans-1,2-Dichloroethene	1.7		1.0	0.50	ug/L			06/04/16 14:27	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 14:27	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 14:27	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 14:27	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 14:27	1
Vinyl chloride	23		1.0	0.50	ug/L			06/04/16 14:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118			-		06/04/16 14:27	1

81 - 121

80 - 120

06/04/16 14:27

06/04/16 14:27

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-6

Matrix: Water

Client Sample ID: C5ES-MW0019I-018.0-20160527
Date Collected: 05/27/16 11:20

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 14:51	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 14:51	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 14:51	•
1,1,2-Trichloroethane	0.50	Ü	5.0	0.50	ug/L			06/04/16 14:51	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 14:51	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 14:51	
1,1-Dichloropropene	0.50	Ü	1.0	0.50	ug/L			06/04/16 14:51	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 14:51	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 14:51	
1,2,4-Trichlorobenzene	0.82		1.0	0.82	ug/L			06/04/16 14:51	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 14:51	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/04/16 14:51	
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/04/16 14:51	
1,2-Dichloroethane	0.50		1.0		ug/L			06/04/16 14:51	
1,2-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 14:51	
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/04/16 14:51	
1,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/04/16 14:51	
1,3-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 14:51	
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/04/16 14:51	
2,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 14:51	
2-Chlorotoluene	0.57		1.0		ug/L			06/04/16 14:51	
2-Hexanone	3.1		25		ug/L			06/04/16 14:51	
I-Chlorotoluene	0.56		1.0		ug/L			06/04/16 14:51	
Acetone	10		25		ug/L			06/04/16 14:51	
Benzene	0.38		1.0		ug/L			06/04/16 14:51	
Bromobenzene	0.54		1.0	0.54	-			06/04/16 14:51	
Bromochloromethane	0.52		1.0		ug/L			06/04/16 14:51	
Bromodichloromethane	0.50		1.0	0.50				06/04/16 14:51	
Bromoform	0.71		5.0		ug/L			06/04/16 14:51	
Bromomethane	0.98		1.0		ug/L			06/04/16 14:51	
Carbon disulfide	0.50		1.0	0.50				06/04/16 14:51	
Carbon tetrachloride	0.50		1.0	0.50	ū			06/04/16 14:51	
Chlorobenzene	0.50		1.0	0.50				06/04/16 14:51	
Chloroethane	0.76		1.0		ug/L			06/04/16 14:51	
Chloroform	0.60		1.0	0.60				06/04/16 14:51	
Chloromethane	0.83		1.0		ug/L			06/04/16 14:51	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 14:51	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 14:51	
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 14:51	
Dibromomethane	0.59		5.0		ug/L			06/04/16 14:51	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 14:51	
Ethylbenzene	0.50		1.0		ug/L			06/04/16 14:51	
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 14:51	
Hexachlorobutadiene	0.90		5.0		ug/L ug/L			06/04/16 14:51	
odomethane	0.90		1.0		ug/L ug/L			06/04/16 14:51	
sopropyl ether	0.70		1.0		ug/L ug/L			06/04/16 14:51	
sopropylbenzene	0.70		1.0		ug/L ug/L			06/04/16 14:51	
	2.6		1.0 25		_			06/04/16 14:51	
Methyl Ethyl Ketone methyl isobutyl ketone	1.8		25 25		ug/L ug/L			06/04/16 14:51	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-6

Client Sample ID: C5ES-MW0019I-018.0-20160527 Date Collected: 05/27/16 11:20 **Matrix: Water**

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 14:51	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 14:51	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 14:51	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 14:51	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 14:51	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 14:51	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 14:51	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 14:51	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 14:51	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 14:51	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 14:51	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 14:51	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 14:51	1
trans-1,2-Dichloroethene	1.7		1.0	0.50	ug/L			06/04/16 14:51	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 14:51	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 14:51	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 14:51	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 14:51	1
Vinyl chloride	29		1.0	0.50	ug/L			06/04/16 14:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118					06/04/16 14:51	1

81 - 121

80 - 120

97

100

TestAmerica Pensacola

06/04/16 14:51

06/04/16 14:51

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-7

Client Sample ID: SFOC-IW0001S-008.5-20160524
Date Collected: 05/24/16 10:59

Matrix: Water

Date Received: 05/28/16 09:48

Method: 200.8 - Metals (ICP/MS) - RA
Analyte Result Qualifier PQL MDL Ur

Analyte Result Qualifier PQL MDL Unit D Prepared Analyzed Dil Fac

 Antimony
 21
 2.5
 0.85
 ug/L
 06/03/16 08:45
 06/06/16 17:05

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-8

Matrix: Water

Date Collected: 05/24/16 10:08 Date Received: 05/28/16 09:48

Method: 200.8 - Metals (ICP/MS) - RA

Client Sample ID: SFOC-IW0004S-007.5-20160524

5

6

9

10

46

13

14

Client: Geosyntec Consultants, Inc.

Client Sample ID: MLPV-IW0006IR-030.5-20160526

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-9

Matrix: Water

Date Collected: 05/26/16 09:50
Date Received: 05/28/16 09:48

Method: 8260B - Volatile Orga Analyte		Qualifier	PQL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 15:17	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 15:17	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 15:17	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 15:17	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 15:17	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 15:17	•
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 15:17	•
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 15:17	•
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 15:17	•
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 15:17	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 15:17	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 15:17	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 15:17	1
1,2-Dichloroethane	0.50	U	1.0		ug/L			06/04/16 15:17	1
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/04/16 15:17	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/04/16 15:17	1
1,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/04/16 15:17	1
1,3-Dichloropropane	0.50	U	1.0	0.50	_			06/04/16 15:17	1
1,4-Dichlorobenzene	0.64	U	1.0	0.64	•			06/04/16 15:17	1
2,2-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 15:17	1
2-Chlorotoluene	0.57		1.0		ug/L			06/04/16 15:17	1
2-Hexanone	3.1		25		ug/L			06/04/16 15:17	
4-Chlorotoluene	0.56		1.0		ug/L			06/04/16 15:17	1
Acetone	18		25		ug/L			06/04/16 15:17	1
Benzene	0.38		1.0	0.38				06/04/16 15:17	
Bromobenzene	0.54		1.0	0.54				06/04/16 15:17	1
Bromochloromethane	0.52		1.0	0.52	-			06/04/16 15:17	1
Bromodichloromethane	0.50		1.0		ug/L			06/04/16 15:17	
Bromoform	0.71		5.0		-			06/04/16 15:17	
Bromomethane	0.98		1.0	0.98	•			06/04/16 15:17	-
Carbon disulfide			1.0		ug/L			06/04/16 15:17	
Carbon tetrachloride	0.51 0.50		1.0		ug/L ug/L			06/04/16 15:17	,
Chlorobenzene	0.50								
	0.50		1.0	0.50	ug/L ug/L			06/04/16 15:17 06/04/16 15:17	
Chloroethane			1.0		-				1
Chloroform	0.60		1.0		ug/L			06/04/16 15:17	1
Chloromethane	0.83		1.0		ug/L			06/04/16 15:17	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 15:17	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 15:17	1
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 15:17	1
Dibromomethane	0.59		5.0		ug/L			06/04/16 15:17	1
Dichlorodifluoromethane	0.85		1.0	0.85	-			06/04/16 15:17	1
Ethylbenzene	0.50		1.0		ug/L			06/04/16 15:17	1
Ethylene Dibromide	0.50		1.0	0.50				06/04/16 15:17	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 15:17	•
odomethane	0.68		1.0	0.68				06/04/16 15:17	
sopropyl ether	0.70		1.0		ug/L			06/04/16 15:17	1
sopropylbenzene	0.53		1.0		ug/L			06/04/16 15:17	1
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/04/16 15:17	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 09:50

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

Trichloroethene

Vinyl acetate

Vinyl chloride

Trichlorofluoromethane

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-9

Client Sample ID: MLPV-IW0006IR-030.5-20160526

Matrix: Water

06/04/16 15:17

06/04/16 15:17

06/04/16 15:17

06/04/16 15:17

Method: 8260B - Volatile Or Analyte	•	Qualifier	PQL	•	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 15:17	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 15:17	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 15:17	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 15:17	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 15:17	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 15:17	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 15:17	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 15:17	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 15:17	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 15:17	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 15:17	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 15:17	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 15:17	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 15:17	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 15:17	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118	-		06/04/16 15:17	1
Dibromofluoromethane	95		81 - 121			06/04/16 15:17	1
Toluene-d8 (Surr)	100		80 - 120			06/04/16 15:17	1

1.0

1.0

25

1.0

0.50 ug/L

0.52 ug/L

2.0 ug/L

0.50 ug/L

0.50 U

0.52 U

2.0 U

0.50 U

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 10:10

Date Received: 05/28/16 09:48

Client Sample ID: MLPV-IW0009I-030.5-20160526

Project/Site: VAB-LTM

methyl isobutyl ketone

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-10

Matrix: Water

Analyte		Qualifier	PQL		Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0		ug/L			06/04/16 15:43	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 15:43	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	•
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 15:43	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 15:43	
1,2,4-Trichlorobenzene	0.82	U	1.0		ug/L			06/04/16 15:43	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 15:43	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/04/16 15:43	
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/04/16 15:43	
1,2-Dichloroethane	0.50		1.0		ug/L			06/04/16 15:43	
1,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 15:43	
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/04/16 15:43	
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/04/16 15:43	
1,3-Dichloropropane	0.50		1.0		ug/L			06/04/16 15:43	
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/04/16 15:43	
2,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 15:43	
2-Chlorotoluene	0.57		1.0		ug/L			06/04/16 15:43	
2-Hexanone	3.1		25		ug/L ug/L			06/04/16 15:43	
	0.56				-				
4-Chlorotoluene			1.0		ug/L			06/04/16 15:43	
Acetone	21		25		ug/L			06/04/16 15:43	
Benzene	0.38		1.0		ug/L			06/04/16 15:43	
Bromobenzene	0.54		1.0		ug/L			06/04/16 15:43	
Bromochloromethane	0.52		1.0		ug/L			06/04/16 15:43	
Bromodichloromethane	0.50		1.0		ug/L			06/04/16 15:43	
Bromoform	0.71		5.0		ug/L			06/04/16 15:43	
Bromomethane	0.98		1.0		ug/L			06/04/16 15:43	
Carbon disulfide	0.50		1.0		ug/L			06/04/16 15:43	•
Carbon tetrachloride	0.50		1.0		ug/L			06/04/16 15:43	
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	
Chloroethane	0.76	U	1.0		ug/L			06/04/16 15:43	
Chloroform	0.60		1.0		ug/L			06/04/16 15:43	
Chloromethane	0.83	U	1.0	0.83	ug/L			06/04/16 15:43	
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	
cis-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 15:43	
Dibromochloromethane	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	•
Dibromomethane	0.59	U	5.0	0.59	ug/L			06/04/16 15:43	
Dichlorodifluoromethane	0.85	U	1.0	0.85	ug/L			06/04/16 15:43	
Ethylbenzene	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	
Ethylene Dibromide	0.50	U	1.0		ug/L			06/04/16 15:43	
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 15:43	
lodomethane	0.68		1.0		ug/L			06/04/16 15:43	
Isopropyl ether	0.70		1.0		ug/L			06/04/16 15:43	· · · · · .
Isopropylbenzene	0.53		1.0		ug/L			06/04/16 15:43	
Methyl Ethyl Ketone	2.6		25		ug/L			06/04/16 15:43	

TestAmerica Pensacola

06/04/16 15:43

1.8 ug/L

1.8 U

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 10:10

Date Received: 05/28/16 09:48

Client Sample ID: MLPV-IW0009I-030.5-20160526

Project/Site: VAB-LTM

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-10

Matrix: Water

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 15:43	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 15:43	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 15:43	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 15:43	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 15:43	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 15:43	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 15:43	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 15:43	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 15:43	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 15:43	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 15:43	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 15:43	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 15:43	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 15:43	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 15:43	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 15:43	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 15:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		78 - 118			•		06/04/16 15:43	1
Dibromofluoromethane	96		81 - 121					06/04/16 15:43	1

80 - 120

100

TestAmerica Pensacola

06/04/16 15:43

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 10:15

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-11

Matrix: Water

Client Sample ID: MLPV-IW0009D-047.5-20160526

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 16:09	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 16:09	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 16:09	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 16:09	1
1,2,4-Trichlorobenzene	0.82	Ü	1.0	0.82	ug/L			06/04/16 16:09	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 16:09	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 16:09	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
1,2-Dichloroethane	0.50	U	1.0	0.50	-			06/04/16 16:09	1
1,2-Dichloropropane	0.50	U	1.0	0.50	_			06/04/16 16:09	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	•			06/04/16 16:09	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54	_			06/04/16 16:09	1
1,3-Dichloropropane	0.50	U	1.0	0.50	-			06/04/16 16:09	1
1,4-Dichlorobenzene	0.64		1.0	0.64	-			06/04/16 16:09	1
2,2-Dichloropropane	0.50		1.0	0.50	-			06/04/16 16:09	1
2-Chlorotoluene	0.57		1.0	0.57	_			06/04/16 16:09	1
2-Hexanone	3.1		25		ug/L			06/04/16 16:09	1
4-Chlorotoluene	0.56		1.0	0.56	Ū			06/04/16 16:09	1
Acetone	13		25		ug/L			06/04/16 16:09	1
Benzene	0.38		1.0	0.38	-			06/04/16 16:09	
Bromobenzene	0.54		1.0	0.54	-			06/04/16 16:09	1
Bromochloromethane	0.52		1.0	0.52	-			06/04/16 16:09	1
Bromodichloromethane	0.50		1.0	0.50	-			06/04/16 16:09	
Bromoform	0.71		5.0	0.71	-			06/04/16 16:09	1
Bromomethane	0.98		1.0	0.98	_			06/04/16 16:09	1
Carbon disulfide	0.50		1.0	0.50				06/04/16 16:09	· · · · · · · · · · · · · · · · · · ·
Carbon tetrachloride	0.50		1.0	0.50	-			06/04/16 16:09	1
Chlorobenzene	0.50		1.0	0.50	-			06/04/16 16:09	1
Chloroethane	0.76		1.0	0.76				06/04/16 16:09	· · · · · · · · · · · · · · · · · · ·
Chloroform	0.60		1.0	0.60	-			06/04/16 16:09	1
Chloromethane	0.83		1.0	0.83	-			06/04/16 16:09	1
cis-1,2-Dichloroethene	0.50		1.0	0.50				06/04/16 16:09	· · · · · · · · · · · · · · · · · · ·
cis-1,3-Dichloropropene	0.50		5.0	0.50				06/04/16 16:09	
Dibromochloromethane	0.50		1.0	0.50				06/04/16 16:09	1
Dibromomethane	0.59		5.0	0.59	_			06/04/16 16:09	
Dichlorodifluoromethane	0.85		1.0	0.85				06/04/16 16:09	1
Ethylbenzene	0.50		1.0	0.50	-			06/04/16 16:09	1
Ethylene Dibromide	0.50		1.0	0.50				06/04/16 16:09	
Ethylene Dibromide Hexachlorobutadiene	0.90		5.0	0.90	•			06/04/16 16:09	1
	0.90		5.0 1.0		•			06/04/16 16:09	1
lodomethane				0.68					
Isopropyl ether	0.70		1.0	0.70	•			06/04/16 16:09	1
Isopropylbenzene	0.53		1.0	0.53	-			06/04/16 16:09	1
Methyl Ethyl Ketone methyl isobutyl ketone	2.6 1.8		25 25		ug/L ug/L			06/04/16 16:09 06/04/16 16:09	1 1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 10:15

Date Received: 05/28/16 09:48

Client Sample ID: MLPV-IW0009D-047.5-20160526

100

Project/Site: VAB-LTM

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-11

Lab Sample ID. 400-122302-11

Matrix: Water

06/04/16 16:09

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 16:09	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 16:09	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 16:09	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 16:09	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 16:09	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 16:09	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 16:09	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 16:09	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 16:09	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 16:09	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 16:09	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 16:09	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 16:09	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 16:09	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 16:09	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 16:09	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118					06/04/16 16:09	1
Dibromofluoromethane	98		81 - 121					06/04/16 16:09	1

80 - 120

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 10:35

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-12

Matrix: Water

Date Received: 05/28/16 09:48

Client Sample ID: MLPV-IW0012I-037.5-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 16:36	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 16:36	
1,1-Dichloroethane	0.50	U	1.0	0.50	-			06/04/16 16:36	
1,1-Dichloroethene	0.50	U	1.0	0.50	-			06/04/16 16:36	
1,1-Dichloropropene	0.50	U	1.0	0.50	-			06/04/16 16:36	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	-			06/04/16 16:36	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	-			06/04/16 16:36	
1,2,4-Trichlorobenzene	0.82		1.0	0.82	-			06/04/16 16:36	
1,2,4-Trimethylbenzene	0.82		1.0	0.82	-			06/04/16 16:36	
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/04/16 16:36	
1,2-Dichlorobenzene	0.50		1.0	0.50	-			06/04/16 16:36	
1,2-Dichloroethane	0.50		1.0	0.50	-			06/04/16 16:36	
1,2-Dichloropropane	0.50		1.0	0.50	-			06/04/16 16:36	
1,3,5-Trimethylbenzene	0.56		1.0	0.56	-			06/04/16 16:36	
1,3,5-11methylbenzene 1,3-Dichlorobenzene	0.56		1.0	0.56	-			06/04/16 16:36	
	0.54				-				
1,3-Dichloropropane			1.0	0.50	-			06/04/16 16:36	
1,4-Dichlorobenzene	0.64		1.0	0.64	-			06/04/16 16:36	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/04/16 16:36	
2-Chlorotoluene	0.57		1.0	0.57	-			06/04/16 16:36	
2-Hexanone	3.1		25		ug/L			06/04/16 16:36	
4-Chlorotoluene	0.56		1.0	0.56	-			06/04/16 16:36	
Acetone	18		25		ug/L			06/04/16 16:36	
Benzene	0.38		1.0	0.38	-			06/04/16 16:36	
Bromobenzene	0.54		1.0	0.54	J			06/04/16 16:36	
Bromochloromethane	0.52		1.0	0.52	-			06/04/16 16:36	
Bromodichloromethane	0.50		1.0	0.50	-			06/04/16 16:36	
Bromoform	0.71	U	5.0	0.71	-			06/04/16 16:36	
Bromomethane	0.98	U	1.0	0.98	-			06/04/16 16:36	
Carbon disulfide	0.57	I	1.0	0.50	ug/L			06/04/16 16:36	
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	
Chloroethane	0.76	U	1.0	0.76	ug/L			06/04/16 16:36	
Chloroform	0.60	U	1.0	0.60	ug/L			06/04/16 16:36	
Chloromethane	0.83	U	1.0	0.83	ug/L			06/04/16 16:36	
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	
cis-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 16:36	
Dibromochloromethane	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	
Dibromomethane	0.59	U	5.0	0.59	ug/L			06/04/16 16:36	
Dichlorodifluoromethane	0.85	U	1.0		ug/L			06/04/16 16:36	
Ethylbenzene	0.50	U	1.0		ug/L			06/04/16 16:36	
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 16:36	
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 16:36	
odomethane	0.68		1.0		ug/L			06/04/16 16:36	
sopropyl ether	0.70		1.0		ug/L			06/04/16 16:36	
sopropylbenzene	0.53		1.0		ug/L			06/04/16 16:36	
Methyl Ethyl Ketone	2.6		25		ug/L			06/04/16 16:36	
methyl isobutyl ketone	1.8		25		ug/L			06/04/16 16:36	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-12

Matrix: Water

Client Sample ID: MLPV-IW0012I-037.5-20160526
Date Collected: 05/26/16 10:35

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 16:36	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 16:36	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 16:36	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 16:36	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 16:36	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 16:36	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 16:36	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 16:36	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 16:36	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 16:36	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 16:36	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 16:36	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 16:36	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 16:36	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 16:36	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 16:36	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 16:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118			-		06/04/16 16:36	1
Dibromofluoromethane	96		81 - 121					06/04/16 16:36	1
Toluene-d8 (Surr)	99		80 - 120					06/04/16 16:36	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 10:40

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-13

Matrix: Water

Client Sample ID: MLPV-IW0012D-047.5-20160526

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	-			06/04/16 17:01	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	Ū			06/04/16 17:01	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	-			06/04/16 17:01	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
1,1-Dichloropropene	0.50	Ū	1.0	0.50	ug/L			06/04/16 17:01	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 17:01	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	-			06/04/16 17:01	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 17:01	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 17:01	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 17:01	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	ug/L			06/04/16 17:01	
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 17:01	
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
1,4-Dichlorobenzene	0.64	U	1.0	0.64	ug/L			06/04/16 17:01	
2,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
2-Chlorotoluene	0.57	U	1.0	0.57	ug/L			06/04/16 17:01	
2-Hexanone	3.1	Ü	25	3.1	ug/L			06/04/16 17:01	
4-Chlorotoluene	0.56	U	1.0	0.56	ug/L			06/04/16 17:01	
Acetone	13	L	25	10	ug/L			06/04/16 17:01	
Benzene	0.38	Ü	1.0	0.38	ug/L			06/04/16 17:01	
Bromobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 17:01	
Bromochloromethane	0.52	U	1.0	0.52	-			06/04/16 17:01	
Bromodichloromethane	0.50	U	1.0	0.50	-			06/04/16 17:01	
Bromoform	0.71	U	5.0	0.71	-			06/04/16 17:01	
Bromomethane	0.98	U	1.0	0.98	_			06/04/16 17:01	
Carbon disulfide	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	
Carbon tetrachloride	0.50	U	1.0	0.50	•			06/04/16 17:01	
Chlorobenzene	0.50	U	1.0	0.50	-			06/04/16 17:01	
Chloroethane	0.76	U	1.0	0.76				06/04/16 17:01	
Chloroform	0.60	U	1.0	0.60	-			06/04/16 17:01	
Chloromethane	0.83	U	1.0	0.83	-			06/04/16 17:01	
cis-1,2-Dichloroethene	0.50		1.0	0.50				06/04/16 17:01	
cis-1,3-Dichloropropene	0.50		5.0	0.50				06/04/16 17:01	
Dibromochloromethane	0.50		1.0	0.50				06/04/16 17:01	
Dibromomethane	0.59		5.0	0.59				06/04/16 17:01	
Dichlorodifluoromethane	0.85		1.0	0.85				06/04/16 17:01	
Ethylbenzene	0.50		1.0	0.50	-			06/04/16 17:01	
Ethylene Dibromide	0.50		1.0	0.50				06/04/16 17:01	
Hexachlorobutadiene	0.90		5.0	0.90	-			06/04/16 17:01	
lodomethane	0.68		1.0	0.68	_			06/04/16 17:01	
Isopropyl ether	0.70		1.0	0.70				06/04/16 17:01	
Isopropylbenzene	0.73		1.0	0.70	_			06/04/16 17:01	
Methyl Ethyl Ketone	2.6		25		ug/L ug/L			06/04/16 17:01	
methyl isobutyl ketone	1.8		25		ug/L ug/L			06/04/16 17:01	

Client: Geosyntec Consultants, Inc.

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-13

Client Sample ID: MLPV-IW0012D-047.5-20160526 Date Collected: 05/26/16 10:40

Matrix: Water

06/04/16 17:01

06/04/16 17:01

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 17:01	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 17:01	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 17:01	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 17:01	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 17:01	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 17:01	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 17:01	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 17:01	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 17:01	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 17:01	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 17:01	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 17:01	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 17:01	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 17:01	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 17:01	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 17:01	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 17:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118					06/04/16 17:01	1

81 - 121

80 - 120

96

98

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 14:43

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-14

Matrix: Water

Method: 8260B - Volatile Org	janic Compo	unds (GC/N	/IS)
Analyte	Result	Qualifier	
1,1,1,2-Tetrachloroethane	0.52	U	
1,1,1-Trichloroethane	0.50	U	
4 4 0 0 Tatus ablance them a	0.50	1.1	

Client Sample ID: MLPV-IW0018D-052.5-20160525

Method: 8260B - Volatile Orga Analyte	Result	Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 17:28	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 17:28	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 17:28	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 17:28	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 17:28	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 17:28	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 17:28	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
1,2-Dichloroethane	0.50	U	1.0		ug/L			06/04/16 17:28	1
1,2-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 17:28	1
1,3,5-Trimethylbenzene	0.56	U	1.0		ug/L			06/04/16 17:28	1
1,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/04/16 17:28	1
1,3-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 17:28	1
1,4-Dichlorobenzene	0.64	U	1.0		ug/L			06/04/16 17:28	1
2,2-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 17:28	1
2-Chlorotoluene	0.57	U	1.0		ug/L			06/04/16 17:28	1
2-Hexanone	3.1	U	25		ug/L			06/04/16 17:28	1
4-Chlorotoluene	0.56	U	1.0		ug/L			06/04/16 17:28	1
Acetone	12		25		ug/L			06/04/16 17:28	1
Benzene	0.38		1.0		ug/L			06/04/16 17:28	1
Bromobenzene	0.54		1.0		ug/L			06/04/16 17:28	1
Bromochloromethane	0.52	U	1.0		ug/L			06/04/16 17:28	1
Bromodichloromethane	0.50	U	1.0		ug/L			06/04/16 17:28	1
Bromoform	0.71		5.0	0.71	ug/L			06/04/16 17:28	1
Bromomethane	0.98		1.0		ug/L			06/04/16 17:28	1
Carbon disulfide	0.50	Ü	1.0		ug/L			06/04/16 17:28	1
Carbon tetrachloride	0.50		1.0		ug/L			06/04/16 17:28	1
Chlorobenzene	0.50		1.0		ug/L			06/04/16 17:28	1
Chloroethane	0.76		1.0		ug/L			06/04/16 17:28	1
Chloroform	0.60		1.0		ug/L			06/04/16 17:28	1
Chloromethane	0.83	U	1.0		ug/L			06/04/16 17:28	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 17:28	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 17:28	1
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 17:28	-
Dibromomethane	0.59		5.0		ug/L			06/04/16 17:28	1
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 17:28	1
Ethylbenzene	0.50		1.0		ug/L			06/04/16 17:28	-
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 17:28	
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 17:28	,
Iodomethane	0.90		1.0		ug/L ug/L			06/04/16 17:28	,
Isopropyl ether	0.70		1.0		ug/L ug/L			06/04/16 17:28	
Isopropylbenzene	0.70		1.0		ug/L ug/L			06/04/16 17:28	,
Methyl Ethyl Ketone	2.6		25		ug/L ug/L			06/04/16 17:28	
methyl isobutyl ketone	1.8		25 25		ug/L ug/L			06/04/16 17:28	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-14

Matrix: Water

Date Collected: 05/25/16 14:43 Date Received: 05/28/16 09:48

Client Sample ID: MLPV-IW0018D-052.5-20160525

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 17:28	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 17:28	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 17:28	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 17:28	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 17:28	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 17:28	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 17:28	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 17:28	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 17:28	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 17:28	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 17:28	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 17:28	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 17:28	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 17:28	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 17:28	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 17:28	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 17:28	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118	-		06/04/16 17:28	1
Dibromofluoromethane	97		81 - 121			06/04/16 17:28	1
Toluene-d8 (Surr)	98		80 - 120			06/04/16 17:28	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:00

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-15

Matrix: Water

Date Received: 05/28/16 09:48	

Client Sample ID: MLPV-IW0028I-030.5-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 17:54	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 17:54	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 17:54	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 17:54	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 17:54	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 17:54	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 17:54	1
1,2-Dichlorobenzene	0.50	Ü	1.0	0.50	ug/L			06/04/16 17:54	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	ug/L			06/04/16 17:54	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 17:54	1
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
1,4-Dichlorobenzene	0.64		1.0	0.64	ug/L			06/04/16 17:54	1
2,2-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 17:54	1
2-Chlorotoluene	0.57	U	1.0		ug/L			06/04/16 17:54	1
2-Hexanone	3.1		25	3.1	⁻			06/04/16 17:54	1
4-Chlorotoluene	0.56	U	1.0	0.56	ug/L			06/04/16 17:54	1
Acetone	20	1	25		ug/L			06/04/16 17:54	1
Benzene	0.38		1.0		ug/L			06/04/16 17:54	1
Bromobenzene	0.54	U	1.0		ug/L			06/04/16 17:54	1
Bromochloromethane	0.52	U	1.0		ug/L			06/04/16 17:54	1
Bromodichloromethane	0.50		1.0		ug/L			06/04/16 17:54	1
Bromoform	0.71	U	5.0		ug/L			06/04/16 17:54	1
Bromomethane	0.98	U	1.0		ug/L			06/04/16 17:54	1
Carbon disulfide	0.50		1.0	0.50	ug/L			06/04/16 17:54	1
Carbon tetrachloride	0.50	U	1.0		ug/L			06/04/16 17:54	1
Chlorobenzene	0.50	U	1.0		ug/L			06/04/16 17:54	1
Chloroethane	0.76		1.0		ug/L			06/04/16 17:54	1
Chloroform	0.60	U	1.0		ug/L			06/04/16 17:54	1
Chloromethane	0.83	U	1.0		ug/L			06/04/16 17:54	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 17:54	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 17:54	1
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 17:54	1
Dibromomethane	0.59		5.0		ug/L			06/04/16 17:54	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 17:54	1
Ethylbenzene	0.50		1.0		ug/L			06/04/16 17:54	1
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 17:54	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 17:54	1
Iodomethane	0.68		1.0		ug/L			06/04/16 17:54	1
Isopropyl ether	0.70		1.0		ug/L			06/04/16 17:54	1
Isopropylbenzene	0.53		1.0		ug/L			06/04/16 17:54	1
Methyl Ethyl Ketone	2.6		25		ug/L			06/04/16 17:54	1
methyl isobutyl ketone	1.8		25		ug/L			06/04/16 17:54	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-15

Matrix: Water

Client	Sample	ID: MLF	PV-IW002	281-030.5-2	0160526

Date Collected: 05/26/16 11:00 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 17:54	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 17:54	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 17:54	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 17:54	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 17:54	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 17:54	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 17:54	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 17:54	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 17:54	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 17:54	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 17:54	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 17:54	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 17:54	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 17:54	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 17:54	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 17:54	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 17:54	1
Vinyl chloride	4.0		1.0	0.50	ug/L			06/04/16 17:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			-		06/04/16 17:54	1
Dibromofluoromethane	95		81 - 121					06/04/16 17:54	1
Toluene-d8 (Surr)	99		80 - 120					06/04/16 17:54	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 10:50

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-16

Matrix: Water

Date Received: 05/28/16 09:48

Client Sample ID: MLPV-IW0029D-044.5-20160526

nalyte		Qualifier	PQL		Unit	D	Prepared	Analyzed	Dil F
,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 18:20	
,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	
,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	
,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 18:20	
,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	
,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	
,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	
,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 18:20	
,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 18:20	
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 18:20	
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/04/16 18:20	
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 18:20	
,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	
,2-Dichloroethane	0.50	U	1.0		ug/L			06/04/16 18:20	
,2-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 18:20	
,3,5-Trimethylbenzene	0.56	U	1.0		ug/L			06/04/16 18:20	
,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/04/16 18:20	
,3-Dichloropropane	0.50	U	1.0	0.50	_			06/04/16 18:20	
,4-Dichlorobenzene	0.64	U	1.0		ug/L			06/04/16 18:20	
, ,2-Dichloropropane	0.50	U	1.0		ug/L			06/04/16 18:20	
-Chlorotoluene	0.57	U	1.0		ug/L			06/04/16 18:20	
-Hexanone	3.1	U	25		ug/L			06/04/16 18:20	
-Chlorotoluene	0.56	U	1.0	0.56	_			06/04/16 18:20	
Acetone	29		25		ug/L			06/04/16 18:20	
Benzene	0.38	U	1.0		ug/L			06/04/16 18:20	
romobenzene	0.54	U	1.0	0.54	_			06/04/16 18:20	
romochloromethane	0.52	U	1.0		ug/L			06/04/16 18:20	
romodichloromethane	0.50	Ü	1.0	0.50				06/04/16 18:20	
romoform	0.71		5.0		ug/L			06/04/16 18:20	
Bromomethane	0.98		1.0		ug/L			06/04/16 18:20	
Carbon disulfide	0.51		1.0		ug/L			06/04/16 18:20	
Carbon tetrachloride	0.50		1.0		ug/L			06/04/16 18:20	
Chlorobenzene	0.50		1.0		ug/L			06/04/16 18:20	
Chloroethane	0.76		1.0		ug/L			06/04/16 18:20	
Chloroform	0.60		1.0		ug/L			06/04/16 18:20	
Chloromethane	0.83		1.0		ug/L			06/04/16 18:20	
is-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 18:20	
is-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 18:20	
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 18:20	
Dibromomethane	0.59		5.0		ug/L			06/04/16 18:20	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 18:20	
Ethylbenzene	0.50		1.0		ug/L ug/L			06/04/16 18:20	
thylene Dibromide	0.50		1.0		ug/L			06/04/16 18:20	
lexachlorobutadiene	0.90		5.0		ug/L ug/L			06/04/16 18:20	
odomethane	0.90		1.0		ug/L ug/L			06/04/16 18:20	
sopropyl ether	0.70		1.0		ug/L			06/04/16 18:20	
sopropylbenzene	0.53		1.0	0.53	ug/L			06/04/16 18:20	
Methyl Ethyl Ketone	2.6	1.1	25	0.0	ug/L			06/04/16 18:20	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-16

Matrice Matrice Matrice

Matrix: Water

Client Sample ID: MLPV-IW0029D-044.5-20160526 Date Collected: 05/26/16 10:50

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 18:20	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 18:20	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 18:20	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 18:20	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 18:20	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 18:20	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 18:20	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 18:20	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 18:20	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 18:20	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 18:20	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 18:20	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 18:20	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 18:20	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 18:20	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 18:20	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 18:20	1
Vinyl chloride	27		1.0	0.50	ug/L			06/04/16 18:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		78 - 118			-		06/04/16 18:20	1
Dibromofluoromethane	96		81 - 121					06/04/16 18:20	1
Toluene-d8 (Surr)	98		80 - 120					06/04/16 18:20	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-17

Matrix: Water

Client Sample ID: MLPV-IW0046-040.0-20160526

Date Collected: 05/26/16 10:55 Date Received: 05/28/16 09:48

1.1.12-Irterlanbrorethane	zed Dil F
1.1.2.2-Trichloroethane	18:46
1.1.2-Trichloroethane	18:46
1.1-Dichloroethane	18:46
1,1-Dichloroethene	18:46
1.1-Dichloropropene	18:46
1.2.3-Trichlorobenzene	18:46
1,2,3-Trichloropropane	18:46
1,2,4-Trichlorobenzene 0.82 U 1.0 0.82 ug/L 06/04/16 1,2,4-Trimethylbenzene 0.82 U 1.0 0.82 ug/L 06/04/16 1,2,2-Dishones-Cholropropane 1.5 U 5.0 1.5 ug/L 06/04/16 1,2-Dichlorophane 0.50 U 1.0 0.50 ug/L 06/04/16 1,2-Dichlorophopane 0.50 U 1.0 0.50 ug/L 06/04/16 1,3-Dichlorobenzene 0.54 U 1.0 0.54 ug/L 06/04/16 1,3-Dichloropropane 0.50 U 1.0 0.54 ug/L 06/04/16 1,4-Dichlorobenzene 0.54 U 1.0 0.54 ug/L 06/04/16 1,4-Dichlorobenzene 0.50 U 1.0 0.50 ug/L 06/04/16 2,2-Dichloropropane 0.50 U 1.0 0.50 ug/L 06/04/16 2,2-Dichloropropane 0.50 U 1.0 0.50 ug/L	18:46
1,2,4-Trimethylbenzene 0.82 U 1.0 0.82 ug/L 06/04/16 1,2-Dibromo-3-Chloropropane 1.5 U 5.0 1.5 ug/L 06/04/16 1,2-Dichrobrozene 0.50 U 1.0 0.50 ug/L 06/04/16 1,2-Dichloropropane 0.50 U 1.0 0.50 ug/L 06/04/16 1,2-Dichloropropane 0.50 U 1.0 0.56 ug/L 06/04/16 1,3-Dichlorobenzene 0.54 U 1.0 0.54 ug/L 06/04/16 1,3-Dichloropropane 0.50 U 1.0 0.54 ug/L 06/04/16 1,3-Dichloropropane 0.50 U 1.0 0.50 ug/L 06/04/16 2,2-Dichloropropane 0.50 U 1.0 0.50 ug/L 06/04/16 2,2-Dichloropropane 0.50 U 1.0 0.50 ug/L 06/04/16 2,2-Dichloropropane 0.50 U 1.0 0.50 ug/L	18:46
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sopropyl ether 0.70 U 1.0 0.70 ug/L 06/04/16	
sopropylbenzene 0.53 U 1.0 0.53 ug/L 06/04/16	
Methyl Ethyl Ketone 2.6 U 25 2.6 ug/L 06/04/16 methyl isobutyl ketone 1.8 U 25 1.8 ug/L 06/04/16	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

06/04/16 18:46

06/04/16 18:46

Lab Sample ID: 400-122302-17

Matrix: Water

Date Collected: 05/26/16 10:55	
Date Received: 05/28/16 09:48	

98

98

Client Sample ID: MLPV-IW0046-040.0-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 18:46	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 18:46	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 18:46	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 18:46	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 18:46	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 18:46	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 18:46	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 18:46	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 18:46	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 18:46	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 18:46	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 18:46	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 18:46	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 18:46	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 18:46	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 18:46	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 18:46	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 18:46	1
Vinyl chloride	8.1		1.0	0.50	ug/L			06/04/16 18:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118					06/04/16 18:46	1

81 - 121

80 - 120

TestAmerica Pensacola	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-18

Matrix: Water

Client Sample ID: MLPV-IW0047-040.0-20160526

Date Collected: 05/26/16 11:10 Date Received: 05/28/16 09:48

Method: 8260B - Volatile Org			•				_	_	
Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52		1.0	0.52	-			06/04/16 19:11	1
1,1,1-Trichloroethane	0.50		1.0	0.50	-			06/04/16 19:11	1
1,1,2,2-Tetrachloroethane	0.50		1.0	0.50				06/04/16 19:11	1
1,1,2-Trichloroethane	0.50		5.0		ug/L			06/04/16 19:11	1
1,1-Dichloroethane	0.50		1.0	0.50	-			06/04/16 19:11	1
1,1-Dichloroethene	0.50		1.0	0.50				06/04/16 19:11	1
1,1-Dichloropropene	0.50		1.0		ug/L			06/04/16 19:11	1
1,2,3-Trichlorobenzene	0.70		1.0	0.70	-			06/04/16 19:11	1
1,2,3-Trichloropropane	0.84		5.0	0.84				06/04/16 19:11	1
1,2,4-Trichlorobenzene	0.82		1.0		ug/L			06/04/16 19:11	1
1,2,4-Trimethylbenzene	0.82		1.0	0.82	-			06/04/16 19:11	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/04/16 19:11	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 19:11	1
1,2-Dichloroethane	0.50	U	1.0	0.50	-			06/04/16 19:11	1
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 19:11	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	ug/L			06/04/16 19:11	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 19:11	1
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 19:11	1
1,4-Dichlorobenzene	0.64	U	1.0	0.64	ug/L			06/04/16 19:11	1
2,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 19:11	1
2-Chlorotoluene	0.57	U	1.0	0.57	ug/L			06/04/16 19:11	1
2-Hexanone	3.1	U	25	3.1	ug/L			06/04/16 19:11	1
4-Chlorotoluene	0.56	U	1.0	0.56	_			06/04/16 19:11	1
Acetone	10	U	25		ug/L			06/04/16 19:11	1
Benzene	0.38	U	1.0	0.38	ug/L			06/04/16 19:11	1
Bromobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 19:11	1
Bromochloromethane	0.52	U	1.0	0.52	ug/L			06/04/16 19:11	1
Bromodichloromethane	0.50	U	1.0	0.50	-			06/04/16 19:11	1
Bromoform	0.71	U	5.0	0.71	-			06/04/16 19:11	1
Bromomethane	0.98	U	1.0		ug/L			06/04/16 19:11	1
Carbon disulfide	0.50		1.0		ug/L			06/04/16 19:11	1
Carbon tetrachloride	0.50		1.0		ug/L			06/04/16 19:11	1
Chlorobenzene	0.50	U	1.0	0.50	-			06/04/16 19:11	1
Chloroethane	0.76		1.0	0.76	-			06/04/16 19:11	1
Chloroform	0.60		1.0	0.60	-			06/04/16 19:11	1
Chloromethane	0.83		1.0	0.83				06/04/16 19:11	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 19:11	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 19:11	1
Dibromochloromethane	0.50		1.0	0.50				06/04/16 19:11	1
Dibromomethane	0.59		5.0		ug/L			06/04/16 19:11	
Dichlorodifluoromethane	0.85		1.0	0.85	-			06/04/16 19:11	1
Ethylbenzene	0.50		1.0	0.50	-			06/04/16 19:11	1
Ethylene Dibromide	0.50		1.0	0.50	-			06/04/16 19:11	
Etrylene bibromide Hexachlorobutadiene	0.90		5.0		ug/L ug/L			06/04/16 19:11	1
lodomethane	0.90		5.0 1.0		ug/L ug/L			06/04/16 19:11	,
Isopropyl ether	0.70		1.0		ug/L			06/04/16 19:11	1
Isopropylbenzene	0.53		1.0	0.53				06/04/16 19:11	1
Methyl Ethyl Ketone methyl isobutyl ketone	2.6		25 25		ug/L ug/L			06/04/16 19:11 06/04/16 19:11	1 1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:10

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-18

Matrix: Water

Date Received: 05/28/16 09:	48		
Method: 8260B - Volatile C	organic Compounds (GC/MS) (Continu	ed)
Analyte	Result Qualifier	PQL	MDL Unit

98

99

Client Sample ID: MLPV-IW0047-040.0-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 19:11	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 19:11	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 19:11	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 19:11	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 19:11	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 19:11	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 19:11	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 19:11	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 19:11	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 19:11	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 19:11	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 19:11	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 19:11	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 19:11	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 19:11	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 19:11	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 19:11	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 19:11	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 19:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			-		06/04/16 19:11	1

81 - 121 80 - 120

TestAmerica Pensacola

06/04/16 19:11

06/04/16 19:11

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-19

Matrix: Water

Client Sample ID: MLPV-IW0048-045.0-20160526

Date Collected: 05/26/16 11:25 Date Received: 05/28/16 09:48

Method: 8260B - Volatile Org Analyte		Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52		1.0	0.52	ug/L		-	06/04/16 19:37	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 19:37	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 19:37	
1,1,2-Trichloroethane	0.50	Ü	5.0	0.50	ug/L			06/04/16 19:37	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 19:37	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 19:37	
1,1-Dichloropropene	0.50		1.0		ug/L			06/04/16 19:37	
1,2,3-Trichlorobenzene	0.70	U	1.0		ug/L			06/04/16 19:37	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 19:37	
I,2,4-Trichlorobenzene	0.82		1.0		ug/L			06/04/16 19:37	
1,2,4-Trimethylbenzene	0.82	U	1.0		ug/L			06/04/16 19:37	
I,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/04/16 19:37	
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/04/16 19:37	
I,2-Dichloroethane	0.50		1.0		ug/L			06/04/16 19:37	
1,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 19:37	
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/04/16 19:37	
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/04/16 19:37	
1,3-Dichloropropane	0.50		1.0		ug/L			06/04/16 19:37	
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/04/16 19:37	
2,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 19:37	
2-Chlorotoluene	0.57		1.0		ug/L			06/04/16 19:37	
2-Hexanone	3.1		25		ug/L			06/04/16 19:37	
I-Chlorotoluene	0.56		1.0		ug/L			06/04/16 19:37	
Acetone	10		25		ug/L			06/04/16 19:37	
Benzene	0.38		1.0	0.38	-			06/04/16 19:37	
Bromobenzene	0.54		1.0	0.54	_			06/04/16 19:37	
Bromochloromethane	0.52		1.0	0.52	-			06/04/16 19:37	
Bromodichloromethane	0.50		1.0	0.50				06/04/16 19:37	
Bromoform	0.30		5.0		ug/L			06/04/16 19:37	
Bromomethane	0.71		1.0	0.98	-			06/04/16 19:37	
Carbon disulfide	0.50		1.0	0.50				06/04/16 19:37	
Carbon distillide	0.50		1.0	0.50	-			06/04/16 19:37	
Chlorobenzene	0.50		1.0	0.50					
Chloroethane	0.50		1.0		Ū			06/04/16 19:37 06/04/16 19:37	
				0.76					
Chloroform	0.60		1.0	0.60	J			06/04/16 19:37	
Chloromethane	0.83		1.0		ug/L			06/04/16 19:37	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 19:37	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 19:37	
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 19:37	
Dibromomethane	0.59		5.0		ug/L			06/04/16 19:37	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 19:37	
Ethylbenzene	0.50		1.0		ug/L			06/04/16 19:37	
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 19:37	
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 19:37	
odomethane	0.68		1.0		ug/L			06/04/16 19:37	
sopropyl ether	0.70		1.0		ug/L			06/04/16 19:37	
sopropylbenzene	0.53		1.0		ug/L			06/04/16 19:37	
Methyl Ethyl Ketone	2.6		25		ug/L			06/04/16 19:37	
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/04/16 19:37	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-19

Client Sample ID: MLPV-IW0048-045.0-20160526 Date Collected: 05/26/16 11:25 Matrix: Water

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 19:37	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 19:37	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 19:37	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 19:37	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 19:37	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 19:37	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 19:37	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 19:37	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 19:37	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 19:37	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 19:37	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 19:37	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 19:37	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 19:37	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 19:37	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 19:37	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 19:37	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 19:37	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 19:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118			-		06/04/16 19:37	1
Dibromofluoromethane	97		81 - 121					06/04/16 19:37	1
Toluene-d8 (Surr)	100		80 - 120					06/04/16 19:37	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 14:34

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-20

ab Sample ID. 400-122302-20

Matrix: Water

_		
Marchael COCCD	V-1-(1-0-0-1-0-1-0-1-(00/M0)	

Client Sample ID: MLPV-IW0049-043.0-20160525

Method: 8260B - Volatile Org Analyte	Result	Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 10:25	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 10:25	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 10:25	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 10:25	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 10:25	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 10:25	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/05/16 10:25	1
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/05/16 10:25	1
1,2-Dichloroethane	0.50		1.0		ug/L			06/05/16 10:25	1
1,2-Dichloropropane	0.50		1.0		ug/L			06/05/16 10:25	1
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/05/16 10:25	1
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/05/16 10:25	1
1,3-Dichloropropane	0.50		1.0		ug/L			06/05/16 10:25	1
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/05/16 10:25	1
2,2-Dichloropropane	0.50		1.0		ug/L			06/05/16 10:25	1
2-Chlorotoluene	0.57		1.0		ug/L			06/05/16 10:25	1
2-Hexanone	3.1		25		ug/L			06/05/16 10:25	
4-Chlorotoluene	0.56		1.0		ug/L			06/05/16 10:25	1
Acetone	24		25		ug/L			06/05/16 10:25	1
Benzene	0.38		1.0		ug/L			06/05/16 10:25	
Bromobenzene	0.54		1.0		ug/L			06/05/16 10:25	1
Bromochloromethane	0.52		1.0		ug/L			06/05/16 10:25	1
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 10:25	
Bromoform	0.71		5.0		ug/L ug/L			06/05/16 10:25	1
Bromomethane	0.98		1.0		_			06/05/16 10:25	1
					ug/L				
Carbon disulfide Carbon tetrachloride	1.1 0.50		1.0		ug/L			06/05/16 10:25	1
			1.0		ug/L			06/05/16 10:25	1
Chlorobenzene	0.50		1.0		ug/L			06/05/16 10:25	
Chloroethane	0.76		1.0		ug/L			06/05/16 10:25	1
Chloroform	0.60		1.0		ug/L			06/05/16 10:25	1
Chloromethane	0.83		1.0		ug/L			06/05/16 10:25	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 10:25	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 10:25	1
Dibromochloromethane	0.50		1.0		ug/L			06/05/16 10:25	
Dibromomethane	0.59		5.0		ug/L			06/05/16 10:25	1
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 10:25	1
Ethylbenzene	0.50		1.0		ug/L			06/05/16 10:25	1
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 10:25	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 10:25	1
Iodomethane	0.68		1.0		ug/L			06/05/16 10:25	1
Isopropyl ether	0.70		1.0		ug/L			06/05/16 10:25	1
Isopropylbenzene	0.53		1.0	0.53	ug/L			06/05/16 10:25	1
Methyl Ethyl Ketone	2.6	U	25		ug/L			06/05/16 10:25	1
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/05/16 10:25	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-20

Matrix: Water

Client	Sample	ID: MLF	۷-IW0049	-043.0-201605	25

Date Collected: 05/25/16 14:34 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 10:25	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 10:25	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 10:25	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 10:25	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 10:25	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 10:25	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 10:25	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 10:25	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 10:25	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 10:25	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 10:25	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 10:25	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 10:25	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 10:25	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 10:25	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 10:25	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 10:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		78 - 118					06/05/16 10:25	1
Dibromofluoromethane	102		81 - 121					06/05/16 10:25	1
Toluene-d8 (Surr)	96		80 - 120					06/05/16 10:25	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-21

Matrix: Water

Client Sample ID: MLPV-IW0050-045.0-20160525

Date Collected: 05/25/16 14:58 Date Received: 05/28/16 09:48

Method: 8260B - Volatile Org ^{Analyte}		Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U –	1.0	0.52	ug/L			06/05/16 10:50	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 10:50	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 10:50	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 10:50	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 10:50	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 10:50	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 10:50	
1,2-Dichlorobenzene	0.50	U	1.0		ug/L			06/05/16 10:50	
1,2-Dichloroethane	0.50	U	1.0	0.50	-			06/05/16 10:50	
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 10:50	
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/05/16 10:50	
1,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/05/16 10:50	
1,3-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 10:50	
1,4-Dichlorobenzene	0.64		1.0	0.64	-			06/05/16 10:50	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/05/16 10:50	
2-Chlorotoluene	0.57		1.0	0.57	-			06/05/16 10:50	
2-Hexanone	3.1		25		ug/L			06/05/16 10:50	
4-Chlorotoluene	0.56		1.0	0.56	-			06/05/16 10:50	
Acetone	10		25		ug/L			06/05/16 10:50	
Benzene	0.38		1.0	0.38	-			06/05/16 10:50	
Bromobenzene	0.54		1.0	0.54	-			06/05/16 10:50	
3romochloromethane	0.52		1.0	0.52	-			06/05/16 10:50	
3romodichloromethane	0.50		1.0		ug/L			06/05/16 10:50	
Bromoform	0.71		5.0		ug/L			06/05/16 10:50	
Bromomethane	0.98		1.0	0.98				06/05/16 10:50	
Carbon disulfide	0.50		1.0	0.50	-			06/05/16 10:50	
Carbon tetrachloride	0.50		1.0	0.50	-			06/05/16 10:50	
Chlorobenzene	0.50		1.0	0.50				06/05/16 10:50	
Chloroethane	0.76		1.0		ug/L			06/05/16 10:50	
Chloroform	0.60		1.0	0.60	-			06/05/16 10:50	
Chloromethane	0.83		1.0		ug/L			06/05/16 10:50	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 10:50	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 10:50	
Dibromochloromethane	0.50		1.0		ug/L ug/L			06/05/16 10:50	
Dibromomethane					ug/L ug/L				
	0.59		5.0					06/05/16 10:50	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 10:50	
Ethylbenzene	0.50		1.0		ug/L			06/05/16 10:50	
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 10:50	
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 10:50	
odomethane	0.68		1.0		ug/L			06/05/16 10:50	
sopropyl ether	0.70		1.0		ug/L			06/05/16 10:50	
sopropylbenzene	0.53		1.0		ug/L			06/05/16 10:50	
Methyl Ethyl Ketone	2.6		25		ug/L			06/05/16 10:50	
nethyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/05/16 10:50	

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 14:58

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-21

Matrix: Water

Date Received: 05/28/16 09:48

100

98

Client Sample ID: MLPV-IW0050-045.0-20160525

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 10:50	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 10:50	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 10:50	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 10:50	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 10:50	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 10:50	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 10:50	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 10:50	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 10:50	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 10:50	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 10:50	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 10:50	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 10:50	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 10:50	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 10:50	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 10:50	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 10:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118			•		06/05/16 10:50	1

81 - 121

80 - 120

TestAmerica Pensacola

06/05/16 10:50

06/05/16 10:50

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 15:10

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-22

Matrix: Water

Date Received: 05/2	8/16 09:48	

Client Sample ID: MLPV-IW0051-050.0-20160525

Method: 8260B - Volatile Org Analyte	Result	Qualifier	PQL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 11:15	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 11:15	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 11:15	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 11:15	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 11:15	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 11:15	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 11:15	1
1,2-Dichlorobenzene	0.50	U	1.0		ug/L			06/05/16 11:15	1
1,2-Dichloroethane	0.50	U	1.0		ug/L			06/05/16 11:15	1
1,2-Dichloropropane	0.50	U	1.0		ug/L			06/05/16 11:15	1
1,3,5-Trimethylbenzene	0.56	U	1.0		ug/L			06/05/16 11:15	1
1,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/05/16 11:15	1
1,3-Dichloropropane	0.50	U	1.0		ug/L			06/05/16 11:15	1
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/05/16 11:15	1
2,2-Dichloropropane	0.50		1.0		ug/L			06/05/16 11:15	1
2-Chlorotoluene	0.57		1.0		ug/L			06/05/16 11:15	1
2-Hexanone	3.1		25		ug/L			06/05/16 11:15	· · · · · · · · 1
4-Chlorotoluene	0.56		1.0		ug/L			06/05/16 11:15	1
Acetone	10		25		ug/L			06/05/16 11:15	1
Benzene	0.38		1.0		ug/L			06/05/16 11:15	· · · · · · · · 1
Bromobenzene	0.54		1.0		ug/L			06/05/16 11:15	1
Bromochloromethane	0.52		1.0		ug/L			06/05/16 11:15	1
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 11:15	
Bromoform	0.71		5.0		ug/L			06/05/16 11:15	1
Bromomethane	0.98		1.0		ug/L			06/05/16 11:15	1
Carbon disulfide	0.68		1.0		ug/L			06/05/16 11:15	
Carbon tetrachloride	0.50		1.0		ug/L			06/05/16 11:15	1
Chlorobenzene	0.50		1.0		ug/L			06/05/16 11:15	1
Chloroethane	0.30		1.0		ug/L ug/L			06/05/16 11:15	
Chloroform	0.60		1.0		ug/L			06/05/16 11:15	1
Chloromethane	0.83		1.0		ug/L			06/05/16 11:15	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 11:15	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 11:15	1
Dibromochloromethane	0.50		1.0		ug/L			06/05/16 11:15	1
Dibromomethane Diablara diffusions and thousand	0.59		5.0		ug/L			06/05/16 11:15	1
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 11:15	1
Ethylbenzene	0.50		1.0		ug/L			06/05/16 11:15	1
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 11:15	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 11:15	1
lodomethane	0.68		1.0		ug/L			06/05/16 11:15	1
Isopropyl ether	0.70		1.0		ug/L			06/05/16 11:15	1
Isopropylbenzene	0.53		1.0		ug/L			06/05/16 11:15	1
Methyl Ethyl Ketone	2.6		25		ug/L			06/05/16 11:15	
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/05/16 11:15	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-22

Client Sample ID: MLPV-IW0051-050.0-20160525 Date Collected: 05/25/16 15:10 **Matrix: Water**

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 11:15	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 11:15	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 11:15	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 11:15	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 11:15	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 11:15	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 11:15	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 11:15	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 11:15	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 11:15	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 11:15	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 11:15	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 11:15	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 11:15	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 11:15	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 11:15	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 11:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118			-		06/05/16 11:15	1
Dibromofluoromethane	101		81 - 121					06/05/16 11:15	1
Toluene-d8 (Surr)	94		80 - 120					06/05/16 11:15	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:55

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-23

Matrix: Water

Date Received: 05/28/16 09:48									
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Client Sample ID: MLPV-IW0052-045.0-20160526

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 11:39	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 11:39	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 11:39	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 11:39	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 11:39	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 11:39	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 11:39	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 11:39	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 11:39	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 11:39	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 11:39	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/05/16 11:39	1
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/05/16 11:39	1
1,2-Dichloroethane	0.50		1.0		ug/L			06/05/16 11:39	1
1,2-Dichloropropane	0.50		1.0		ug/L			06/05/16 11:39	1
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/05/16 11:39	1
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/05/16 11:39	1
1,3-Dichloropropane	0.50		1.0		ug/L			06/05/16 11:39	1
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/05/16 11:39	1
2,2-Dichloropropane	0.50		1.0		ug/L			06/05/16 11:39	1
2-Chlorotoluene	0.57		1.0		ug/L			06/05/16 11:39	1
2-Hexanone	3.1		25		ug/L			06/05/16 11:39	
4-Chlorotoluene	0.56		1.0		ug/L			06/05/16 11:39	1
Acetone	10		25		ug/L			06/05/16 11:39	1
Benzene	0.38		1.0		ug/L			06/05/16 11:39	
Bromobenzene	0.54		1.0		ug/L			06/05/16 11:39	1
Bromochloromethane	0.52		1.0		ug/L			06/05/16 11:39	1
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 11:39	
Bromoform	0.71		5.0		ug/L			06/05/16 11:39	1
Bromomethane	0.98		1.0		ug/L			06/05/16 11:39	1
Carbon disulfide	0.67		1.0		ug/L			06/05/16 11:39	
Carbon distillide Carbon tetrachloride	0.50		1.0		ug/L			06/05/16 11:39	1
Chlorobenzene	0.50		1.0		ug/L ug/L			06/05/16 11:39	
Chloroethane	0.76		1.0		-			06/05/16 11:39	1 1
Chloroform	0.60		1.0		ug/L			06/05/16 11:39	1
					ug/L				
Chloromethane	0.83		1.0		ug/L			06/05/16 11:39	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 11:39	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 11:39	1
Dibromochloromethane	0.50		1.0		ug/L			06/05/16 11:39	
Dibromomethane	0.59		5.0		ug/L			06/05/16 11:39	1
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 11:39	1
Ethylbenzene	0.50		1.0		ug/L			06/05/16 11:39	
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 11:39	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 11:39	1
Iodomethane	0.68		1.0		ug/L			06/05/16 11:39	
Isopropyl ether	0.70		1.0		ug/L			06/05/16 11:39	1
Isopropylbenzene	0.53		1.0		ug/L			06/05/16 11:39	1
Methyl Ethyl Ketone	2.6		25		ug/L			06/05/16 11:39	1
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/05/16 11:39	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:55

Date Received: 05/28/16 09:48

Client Sample ID: MLPV-IW0052-045.0-20160526

Project/Site: VAB-LTM

Vinyl chloride

TestAmerica Job ID: 400-122302-1

06/05/16 11:39

Lab Sample ID: 400-122302-23

Matrix: Water

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 11:39	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 11:39	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 11:39	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 11:39	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 11:39	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 11:39	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 11:39	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 11:39	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 11:39	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 11:39	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 11:39	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 11:39	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 11:39	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 11:39	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 11:39	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 11:39	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 11:39	1
Vinyl acetate	2.0	Ü	25	2.0	ug/L			06/05/16 11:39	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118	-		06/05/16 11:39	1
Dibromofluoromethane	100		81 - 121			06/05/16 11:39	1
Toluene-d8 (Surr)	94		80 - 120			06/05/16 11:39	1

1.0

0.50 ug/L

79

Client: Geosyntec Consultants, Inc.

Client Sample ID: MLPV-IW0053-040.0-20160526

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-24

Matrix: Water

Date Collected: 05/26/16 10:20 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52		1.0	0.52		— – ·		06/05/16 12:03	
1,1,1-Trichloroethane	0.50	U	1.0		ug/L			06/05/16 12:03	
1,1,2,2-Tetrachloroethane	0.50		1.0	0.50	-			06/05/16 12:03	
1,1,2-Trichloroethane	0.50		5.0		ug/L			06/05/16 12:03	
1,1-Dichloroethane	0.50		1.0	0.50	-			06/05/16 12:03	
1,1-Dichloroethene	0.50		1.0	0.50	-			06/05/16 12:03	
1,1-Dichloropropene	0.50		1.0	0.50	-			06/05/16 12:03	
1,2,3-Trichlorobenzene	0.70		1.0	0.70				06/05/16 12:03	
1,2,3-Trichloropropane	0.84		5.0	0.84	-			06/05/16 12:03	
1,2,4-Trichlorobenzene	0.82		1.0	0.82	-			06/05/16 12:03	
1,2,4-Trimethylbenzene	0.82		1.0	0.82				06/05/16 12:03	
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/05/16 12:03	,
1,2-Dichlorobenzene	0.50		1.0	0.50				06/05/16 12:03	· · · · · ,
1,2-Dichloroethane	0.50		1.0	0.50	-			06/05/16 12:03	,
1,2-Dichloropropane	0.50		1.0	0.50	-			06/05/16 12:03	
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/05/16 12:03	,
1,3-Dichlorobenzene	0.54		1.0	0.54	-			06/05/16 12:03	
1,3-Dichloropropane	0.54		1.0	0.50	-			06/05/16 12:03	
	0.50							06/05/16 12:03	
1,4-Dichlorobenzene	0.50		1.0 1.0	0.64 0.50	-			06/05/16 12:03	
2,2-Dichloropropane	0.50				-				
2-Chlorotoluene	3.1		1.0	0.57	-			06/05/16 12:03	
2-Hexanone			25		ug/L			06/05/16 12:03	•
4-Chlorotoluene	0.56		1.0	0.56	-			06/05/16 12:03	•
Acetone	10		25		ug/L			06/05/16 12:03	
Benzene	0.38		1.0	0.38	_			06/05/16 12:03	•
Bromobenzene	0.54		1.0	0.54	-			06/05/16 12:03	•
Bromochloromethane	0.52		1.0	0.52	-			06/05/16 12:03	
Bromodichloromethane	0.50		1.0	0.50	-			06/05/16 12:03	•
Bromoform	0.71		5.0	0.71	-			06/05/16 12:03	•
Bromomethane	0.98		1.0	0.98	-			06/05/16 12:03	
Carbon disulfide	0.50		1.0		ug/L			06/05/16 12:03	•
Carbon tetrachloride	0.50		1.0	0.50	-			06/05/16 12:03	•
Chlorobenzene	0.50		1.0	0.50	-			06/05/16 12:03	
Chloroethane	0.76		1.0	0.76	-			06/05/16 12:03	•
Chloroform	0.60		1.0	0.60				06/05/16 12:03	•
Chloromethane	0.83	U	1.0		ug/L			06/05/16 12:03	
cis-1,2-Dichloroethene	4.0		1.0	0.50	ug/L			06/05/16 12:03	•
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 12:03	•
Dibromochloromethane	0.50	U	1.0		ug/L			06/05/16 12:03	•
Dibromomethane	0.59	U	5.0	0.59	ug/L			06/05/16 12:03	•
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 12:03	•
Ethylbenzene	0.50	U	1.0	0.50	ug/L			06/05/16 12:03	•
Ethylene Dibromide	0.50	U	1.0	0.50	ug/L			06/05/16 12:03	
Hexachlorobutadiene	0.90	U	5.0	0.90	ug/L			06/05/16 12:03	
lodomethane	0.68	U	1.0	0.68	ug/L			06/05/16 12:03	•
Isopropyl ether	0.70	U	1.0	0.70	ug/L			06/05/16 12:03	
Isopropylbenzene	0.53	U	1.0	0.53	ug/L			06/05/16 12:03	•
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/05/16 12:03	•
methyl isobutyl ketone	1.8		25		ug/L			06/05/16 12:03	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-24

Matrix: Water

Date Collected: 05/26/16 10:20 Date Received: 05/28/16 09:48

101

95

Client Sample ID: MLPV-IW0053-040.0-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 12:03	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 12:03	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 12:03	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 12:03	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 12:03	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 12:03	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 12:03	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 12:03	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 12:03	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 12:03	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 12:03	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 12:03	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 12:03	1
trans-1,2-Dichloroethene	0.60	1	1.0	0.50	ug/L			06/05/16 12:03	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 12:03	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 12:03	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 12:03	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 12:03	1
Vinyl chloride	52		1.0	0.50	ug/L			06/05/16 12:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92	-	78 - 118					06/05/16 12:03	1

81 - 121

80 - 120

06/05/16 12:03

06/05/16 12:03

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:20

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-25

Matrix: Water

Date Received: 05/28/16 09:48	

Client Sample ID: MPLV-IW0054-045.0-20160526

Method: 8260B - Volatile Orga Analyte	Result	Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 12:29	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 12:29	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 12:29	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 12:29	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 12:29	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 12:29	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 12:29	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	
1,2-Dichloroethane	0.50	U	1.0	0.50	-			06/05/16 12:29	
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 12:29	
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/05/16 12:29	
1,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/05/16 12:29	
1,3-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 12:29	
1,4-Dichlorobenzene	0.64	U	1.0	0.64	-			06/05/16 12:29	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/05/16 12:29	
2-Chlorotoluene	0.57		1.0	0.57	-			06/05/16 12:29	
2-Hexanone	3.1		25		ug/L			06/05/16 12:29	
4-Chlorotoluene	0.56		1.0	0.56	-			06/05/16 12:29	
Acetone	15		25		ug/L			06/05/16 12:29	
Benzene	0.38		1.0	0.38	-			06/05/16 12:29	
Bromobenzene	0.54		1.0	0.54	-			06/05/16 12:29	
Bromochloromethane	0.52		1.0	0.52	-			06/05/16 12:29	
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 12:29	
Bromoform	0.71		5.0	0.71	-			06/05/16 12:29	
Bromomethane	0.98		1.0	0.98	_			06/05/16 12:29	
Carbon disulfide	0.50		1.0	0.50				06/05/16 12:29	
Carbon tetrachloride	0.50		1.0	0.50				06/05/16 12:29	
Chlorobenzene	0.50		1.0	0.50	-			06/05/16 12:29	
Chloroethane	0.76		1.0	0.76	-			06/05/16 12:29	
Chloroform	0.60		1.0	0.60	-			06/05/16 12:29	
Chloromethane	0.83		1.0	0.83	_			06/05/16 12:29	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 12:29	
•	0.50		5.0		ug/L				
cis-1,3-Dichloropropene Dibromochloromethane	0.50		1.0		ug/L ug/L			06/05/16 12:29 06/05/16 12:29	
Dibromomethane					-			06/05/16 12:29	
Dichlorodifluoromethane	0.59		5.0 1.0		ug/L				
	0.85		1.0		ug/L			06/05/16 12:29	
Ethylbenzene	0.50		1.0		ug/L			06/05/16 12:29	
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 12:29	
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 12:29	
odomethane	0.68		1.0		ug/L			06/05/16 12:29	
sopropyl ether	0.70		1.0		ug/L			06/05/16 12:29	
sopropylbenzene	0.53		1.0		ug/L			06/05/16 12:29	
Methyl Ethyl Ketone	2.6	U	25	26	ug/L			06/05/16 12:29	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-25

Matrix: Water

Client Sample ID: MPLV-IW0054-045.0-20160526 Date Collected: 05/26/16 11:20

Date Received: 05/28/16 09:48

Analyte		Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 12:29	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 12:29	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 12:29	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 12:29	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 12:29	1
N-Propylbenzene	0.69	Ü	1.0	0.69	ug/L			06/05/16 12:29	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 12:29	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 12:29	1
sec-Butylbenzene	0.70	Ü	1.0	0.70	ug/L			06/05/16 12:29	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 12:29	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 12:29	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 12:29	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 12:29	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 12:29	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 12:29	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 12:29	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 12:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			-		06/05/16 12:29	1
Dibromofluoromethane	101		81 - 121					06/05/16 12:29	1
Toluene-d8 (Surr)	94		80 - 120					06/05/16 12:29	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-26

Matrix: Water

Client Sample ID: MPLV-IW0055-045.0-20160525

Date Collected: 05/25/16 16:08

Date Received: 05/28/16 09:48

Analyte	anic Compo Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52		1.0		ug/L	— – ·		06/07/16 14:34	
1,1,1-Trichloroethane	0.50		1.0		ug/L			06/07/16 14:34	
1,1,2,2-Tetrachloroethane	0.50	U	1.0		ug/L			06/07/16 14:34	
1,1,2-Trichloroethane	0.50	Ü	5.0		ug/L			06/07/16 14:34	
1,1-Dichloroethane	0.50		1.0		ug/L			06/07/16 14:34	
1.1-Dichloroethene	0.50		1.0		ug/L			06/07/16 14:34	
1,1-Dichloropropene	0.50		1.0		ug/L			06/07/16 14:34	
1,2,3-Trichlorobenzene	0.70		1.0		ug/L			06/07/16 14:34	
1,2,3-Trichloropropane	0.84		5.0		ug/L			06/07/16 14:34	
1,2,4-Trichlorobenzene	0.82		1.0		ug/L			06/07/16 14:34	
1,2,4-Trimethylbenzene	0.82		1.0	0.82	-			06/07/16 14:34	
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/07/16 14:34	
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/07/16 14:34	
1,2-Dichloroethane	0.50		1.0	0.50	-			06/07/16 14:34	
1,2-Dichloropropane	0.50		1.0		ug/L			06/07/16 14:34	
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/07/16 14:34	
1,3-Dichlorobenzene	0.54		1.0	0.54	-			06/07/16 14:34	
1,3-Dichloropropane	0.50		1.0	0.50	-			06/07/16 14:34	
1,4-Dichlorobenzene	0.64		1.0	0.64	-			06/07/16 14:34	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/07/16 14:34	
2-Chlorotoluene	0.57		1.0	0.57				06/07/16 14:34	
2-Hexanone	3.1		25		ug/L			06/07/16 14:34	
4-Chlorotoluene	0.56		1.0		ug/L			06/07/16 14:34	
Acetone	20		25		ug/L			06/07/16 14:34	
Benzene	0.38		1.0		ug/L			06/07/16 14:34	
Bromobenzene	0.54		1.0		ug/L			06/07/16 14:34	
Bromochloromethane	0.54		1.0	0.52	-			06/07/16 14:34	
Bromodichloromethane	0.52		1.0		ug/L			06/07/16 14:34	
Bromoform	0.30		5.0		ug/L ug/L			06/07/16 14:34	
Bromomethane	0.71		1.0	0.71	_			06/07/16 14:34	
Carbon disulfide	0.50		1.0		ug/L			06/07/16 14:34	
Carbon distillide Carbon tetrachloride	0.50		1.0		ug/L ug/L			06/07/16 14:34	
Carbon tetrachionde Chlorobenzene	0.50		1.0		•			06/07/16 14:34	
Chloroethane	0.50		1.0	0.50	ug/L ug/L			06/07/16 14:34	
Chloroform	0.60		1.0		-			06/07/16 14:34	
Chloromethane				0.60	_				
	0.83		1.0		ug/L			06/07/16 14:34	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/07/16 14:34	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/07/16 14:34	
Dibromochloromethane Dibromomethane	0.50		1.0 5.0		ug/L			06/07/16 14:34	
	0.59				ug/L			06/07/16 14:34	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/07/16 14:34	
Ethylpenzene	0.50		1.0		ug/L			06/07/16 14:34	
Ethylene Dibromide	0.50		1.0		ug/L			06/07/16 14:34	
Hexachlorobutadiene	0.90		5.0		ug/L			06/07/16 14:34	
odomethane	0.68		1.0		ug/L			06/07/16 14:34	
sopropyl ether	0.70		1.0		ug/L			06/07/16 14:34	
sopropylbenzene	0.53		1.0		ug/L			06/07/16 14:34	
Methyl Ethyl Ketone methyl isobutyl ketone	2.6 1.8		25 25		ug/L ug/L			06/07/16 14:34 06/07/16 14:34	

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 16:08

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-26

Matrix: Water

Method: 8260B - Volatile Or	rganic Compounds (GC/MS)) (Continu	ed)		
Δnalyte	Result Qualifier	POI	MDI	Unit	

106

92

Client Sample ID: MPLV-IW0055-045.0-20160525

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/07/16 14:34	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/07/16 14:34	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/07/16 14:34	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/07/16 14:34	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/07/16 14:34	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/07/16 14:34	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/07/16 14:34	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/07/16 14:34	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/07/16 14:34	1
Styrene	1.0	U	1.0	1.0	ug/L			06/07/16 14:34	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/07/16 14:34	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/07/16 14:34	1
Toluene	0.70	U	1.0	0.70	ug/L			06/07/16 14:34	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/07/16 14:34	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/07/16 14:34	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/07/16 14:34	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/07/16 14:34	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/07/16 14:34	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/07/16 14:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			-		06/07/16 14:34	1

81 - 121

80 - 120

TestAmerica Pensacola

06/07/16 14:34

06/07/16 14:34

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 14:21

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-27

Matrix: Water

Date Received: 05/28/16 09:48

Client Sample ID: MPLV-IW0056-035.0-20160525

I,1,1,2-Tetrachloroethane I,1,1-Trichloroethane I,1,2,2-Tetrachloroethane I,1,2-Trichloroethane	0.52 0.50	U	1.0	0.52	ug/L		06/05/16 13:21	
1,1,2,2-Tetrachloroethane	0.50		1.0	0.52	ug/L		06/05/16 13.21	
	0.00	U	1.0	0.50	ug/L		06/05/16 13:21	
1,1,2-Trichloroethane	0.50	U	1.0	0.50	ug/L		06/05/16 13:21	
	0.50	U	5.0	0.50	ug/L		06/05/16 13:21	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L		06/05/16 13:21	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L		06/05/16 13:21	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L		06/05/16 13:21	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L		06/05/16 13:21	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L		06/05/16 13:21	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L		06/05/16 13:21	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L		06/05/16 13:21	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L		06/05/16 13:21	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L		06/05/16 13:21	
1,2-Dichloroethane	0.50	U	1.0		ug/L		06/05/16 13:21	
1,2-Dichloropropane	0.50	U	1.0		ug/L		06/05/16 13:21	
1,3,5-Trimethylbenzene	0.56	U	1.0		ug/L		06/05/16 13:21	
1,3-Dichlorobenzene	0.54	U	1.0		ug/L		06/05/16 13:21	
1,3-Dichloropropane	0.50	U	1.0	0.50	_		06/05/16 13:21	
1,4-Dichlorobenzene	0.64	Ü	1.0		ug/L		06/05/16 13:21	
2,2-Dichloropropane	0.50		1.0		ug/L		06/05/16 13:21	
2-Chlorotoluene	0.57		1.0		ug/L		06/05/16 13:21	
2-Hexanone	3.1		25		ug/L		06/05/16 13:21	
4-Chlorotoluene	0.56		1.0	0.56	_		06/05/16 13:21	
Acetone	10		25		ug/L		06/05/16 13:21	
Benzene	0.38		1.0		ug/L		06/05/16 13:21	
Bromobenzene	0.54		1.0	0.54	_		06/05/16 13:21	
Bromochloromethane	0.52		1.0	0.52	Ü		06/05/16 13:21	
Bromodichloromethane	0.50		1.0	0.50			06/05/16 13:21	
Bromoform	0.71		5.0		ug/L		06/05/16 13:21	
Bromomethane	0.98		1.0		ug/L		06/05/16 13:21	
Carbon disulfide	1.0		1.0		ug/L		06/05/16 13:21	
Carbon tetrachloride	0.50	U	1.0		ug/L		06/05/16 13:21	
Chlorobenzene	0.50		1.0		ug/L		06/05/16 13:21	
Chloroethane	0.76		1.0		ug/L		06/05/16 13:21	
Chloroform	0.60		1.0		ug/L		06/05/16 13:21	
Chloromethane	0.83		1.0		ug/L		06/05/16 13:21	
cis-1,2-Dichloroethene	0.50		1.0		ug/L		06/05/16 13:21	
•	0.50							
cis-1,3-Dichloropropene Dibromochloromethane	0.50		5.0 1.0		ug/L		06/05/16 13:21 06/05/16 13:21	
Dibromomethane					ug/L ug/L			
	0.59		5.0				06/05/16 13:21	
Dichlorodifluoromethane	0.85		1.0		ug/L		06/05/16 13:21	
Ethylbenzene	0.50		1.0		ug/L		06/05/16 13:21	
Ethylene Dibromide	0.50		1.0		ug/L		06/05/16 13:21	
Hexachlorobutadiene	0.90		5.0		ug/L		06/05/16 13:21	
odomethane	0.68		1.0		ug/L		06/05/16 13:21	
sopropyl ether	0.70		1.0		ug/L		06/05/16 13:21	
sopropylbenzene	0.53		1.0		ug/L		06/05/16 13:21	
Methyl Ethyl Ketone	2.6		25 25	2.6	ug/L		06/05/16 13:21	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-27

Matrix: Water

Date Collected: 05/25/16 14:21 Date Received: 05/28/16 09:48

101

93

Client Sample ID: MPLV-IW0056-035.0-20160525

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 13:21	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 13:21	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 13:21	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 13:21	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 13:21	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 13:21	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 13:21	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 13:21	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 13:21	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 13:21	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 13:21	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 13:21	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 13:21	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 13:21	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 13:21	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 13:21	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 13:21	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 13:21	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 13:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene	93	-	78 - 118					06/05/16 13:21	1

81 - 121

80 - 120

06/05/16 13:21

06/05/16 13:21

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-28

Matrix: Water

Client Sample ID: PCCA-MW0004-010.0-20160525 Date Collected: 05/25/16 15:48

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U –	1.0	0.52	ug/L		-	06/05/16 13:47	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	-			06/05/16 13:47	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	-			06/05/16 13:47	
1,1-Dichloroethane	0.50	U	1.0	0.50	-			06/05/16 13:47	
1,1-Dichloroethene	0.50	U	1.0	0.50	_			06/05/16 13:47	
1,1-Dichloropropene	0.50		1.0	0.50	-			06/05/16 13:47	
1,2,3-Trichlorobenzene	0.70		1.0	0.70	-			06/05/16 13:47	
1,2,3-Trichloropropane	0.84		5.0	0.84	-			06/05/16 13:47	
1,2,4-Trichlorobenzene	0.82		1.0	0.82	-			06/05/16 13:47	
1,2,4-Trimethylbenzene	0.82		1.0	0.82	-			06/05/16 13:47	
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/05/16 13:47	
1,2-Dichlorobenzene	0.50		1.0	0.50	-			06/05/16 13:47	
1,2-Dichloroethane	0.50		1.0	0.50	-			06/05/16 13:47	
1,2-Dichloropropane	0.50		1.0	0.50	-			06/05/16 13:47	
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/05/16 13:47	
1,3-Dichlorobenzene	0.54		1.0	0.54	-			06/05/16 13:47	
	0.54		1.0	0.50	-			06/05/16 13:47	
1,3-Dichloropropane					-			06/05/16 13:47	
1,4-Dichlorobenzene	0.64		1.0		ug/L				
2,2-Dichloropropane	0.50		1.0	0.50	-			06/05/16 13:47	
2-Chlorotoluene	0.57		1.0	0.57	-			06/05/16 13:47	
2-Hexanone	3.1		25		ug/L			06/05/16 13:47	
4-Chlorotoluene	0.56		1.0	0.56	-			06/05/16 13:47	
Acetone	10		25		ug/L			06/05/16 13:47	
Benzene	0.38		1.0	0.38	_			06/05/16 13:47	
Bromobenzene	0.54		1.0	0.54	J			06/05/16 13:47	
Bromochloromethane	0.52		1.0	0.52	-			06/05/16 13:47	
Bromodichloromethane	0.50		1.0	0.50	-			06/05/16 13:47	
Bromoform	0.71	U	5.0	0.71	-			06/05/16 13:47	
Bromomethane	0.98	U	1.0	0.98	-			06/05/16 13:47	
Carbon disulfide	0.50		1.0	0.50	-			06/05/16 13:47	
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	
Chloroethane	0.76	U	1.0	0.76	ug/L			06/05/16 13:47	
Chloroform	0.60	U	1.0	0.60	ug/L			06/05/16 13:47	
Chloromethane	0.83	U	1.0	0.83	ug/L			06/05/16 13:47	
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	
cis-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 13:47	
Dibromochloromethane	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	
Dibromomethane	0.59	U	5.0	0.59	ug/L			06/05/16 13:47	
Dichlorodifluoromethane	0.85	U	1.0		ug/L			06/05/16 13:47	
Ethylbenzene	0.50		1.0		ug/L			06/05/16 13:47	
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 13:47	
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 13:47	
odomethane	0.68		1.0		ug/L			06/05/16 13:47	
sopropyl ether	0.70		1.0		ug/L			06/05/16 13:47	
sopropylbenzene	0.70		1.0		ug/L			06/05/16 13:47	
Methyl Ethyl Ketone	2.6		25		ug/L			06/05/16 13:47	
methyl isobutyl ketone	1.8		25 25		ug/L ug/L			06/05/16 13:47	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-28

Client Sample ID: PCCA-MW0004-010.0-20160525 Date Collected: 05/25/16 15:48 **Matrix: Water**

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 13:47	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 13:47	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 13:47	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 13:47	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 13:47	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 13:47	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 13:47	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 13:47	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 13:47	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 13:47	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 13:47	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 13:47	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 13:47	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 13:47	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 13:47	1
Vinyl acetate	2.0	Ü	25	2.0	ug/L			06/05/16 13:47	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 13:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			•		06/05/16 13:47	1
Dibromofluoromethane	101		81 - 121					06/05/16 13:47	1
Toluene-d8 (Surr)	94		80 - 120					06/05/16 13:47	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 15:56

Date Received: 05/28/16 09:48

Client Sample ID: PCCA-MW0017-020.0-20160525

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-29

Matrix: Water

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 14:13	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 14:13	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 14:13	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 14:13	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 14:13	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 14:13	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 14:13	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	
1,3,5-Trimethylbenzene	0.56	U	1.0		ug/L			06/05/16 14:13	
1,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/05/16 14:13	
1,3-Dichloropropane	0.50	U	1.0		ug/L			06/05/16 14:13	
1,4-Dichlorobenzene	0.64	U	1.0		ug/L			06/05/16 14:13	
2,2-Dichloropropane	0.50	U	1.0		ug/L			06/05/16 14:13	
2-Chlorotoluene	0.57	U	1.0		ug/L			06/05/16 14:13	
2-Hexanone	3.1		25		ug/L			06/05/16 14:13	
4-Chlorotoluene	0.56		1.0		ug/L			06/05/16 14:13	
Acetone	14		25		ug/L			06/05/16 14:13	
Benzene	0.38		1.0		ug/L			06/05/16 14:13	
Bromobenzene	0.54		1.0		ug/L			06/05/16 14:13	
Bromochloromethane	0.52		1.0		ug/L			06/05/16 14:13	
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 14:13	
Bromoform	0.71		5.0		ug/L			06/05/16 14:13	
Bromomethane	0.98		1.0		ug/L			06/05/16 14:13	
Carbon disulfide	0.92		1.0		ug/L			06/05/16 14:13	
Carbon tetrachloride	0.50		1.0		ug/L			06/05/16 14:13	
Chlorobenzene	0.50		1.0		ug/L			06/05/16 14:13	
Chloroethane	0.76		1.0		ug/L			06/05/16 14:13	
Chloroform	0.60		1.0		ug/L			06/05/16 14:13	
Chloromethane	0.83		1.0		ug/L			06/05/16 14:13	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 14:13	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 14:13	
Dibromochloromethane	0.50		1.0		ug/L ug/L			06/05/16 14:13	
Dibromomethane					ug/L				
Dichlorodifluoromethane	0.59 0.85		5.0 1.0					06/05/16 14:13 06/05/16 14:13	
	0.50		1.0		ug/L ug/L			06/05/16 14:13	
Ethylpenzene			1.0		"				
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 14:13	
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 14:13	
lodomethane	0.68		1.0		ug/L			06/05/16 14:13	
Isopropyl ether	0.70		1.0		ug/L			06/05/16 14:13	
lsopropylbenzene Methyl Ethyl Ketone	0.53 2.6		1.0 25		ug/L ug/L			06/05/16 14:13 06/05/16 14:13	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-29

Matrix: Water

Client Sample ID: PCCA-MW0017-020.0-20160525 Date Collected: 05/25/16 15:56

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 14:13	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 14:13	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 14:13	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 14:13	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 14:13	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 14:13	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 14:13	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 14:13	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 14:13	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 14:13	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 14:13	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 14:13	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 14:13	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 14:13	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 14:13	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 14:13	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 14:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		78 - 118			-		06/05/16 14:13	1
Dibromofluoromethane	100		81 - 121					06/05/16 14:13	1
Toluene-d8 (Surr)	93		80 - 120					06/05/16 14:13	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-30

Matrix: Water

Client Sample ID: PRES-IW0007I-034.5-20160525 Date Collected: 05/25/16 14:07

Date Received: 05/28/16 09:48

Method: 8260B - Volatile Org ^{Analyte}		Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U –	1.0	0.52	ug/L			06/05/16 14:39	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 14:39	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 14:39	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 14:39	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 14:39	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 14:39	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 14:39	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	
1,2-Dichloroethane	0.50	U	1.0		ug/L			06/05/16 14:39	
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 14:39	
1,3,5-Trimethylbenzene	0.56	U	1.0		ug/L			06/05/16 14:39	
1,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/05/16 14:39	
1,3-Dichloropropane	0.50	U	1.0		ug/L			06/05/16 14:39	
1,4-Dichlorobenzene	0.64	U	1.0		ug/L			06/05/16 14:39	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/05/16 14:39	
2-Chlorotoluene	0.57	U	1.0		ug/L			06/05/16 14:39	
2-Hexanone	3.1		25		ug/L			06/05/16 14:39	
4-Chlorotoluene	0.56	U	1.0		ug/L			06/05/16 14:39	
Acetone	16	1	25		ug/L			06/05/16 14:39	
Benzene	0.38		1.0		ug/L			06/05/16 14:39	
Bromobenzene	0.54	U	1.0	0.54	-			06/05/16 14:39	
Bromochloromethane	0.52	U	1.0		ug/L			06/05/16 14:39	
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 14:39	
Bromoform	0.71	U	5.0		ug/L			06/05/16 14:39	
Bromomethane	0.98	U	1.0		ug/L			06/05/16 14:39	
Carbon disulfide	1.8		1.0		ug/L			06/05/16 14:39	
Carbon tetrachloride	0.50	U	1.0	0.50	-			06/05/16 14:39	
Chlorobenzene	0.50	U	1.0	0.50				06/05/16 14:39	
Chloroethane	0.76		1.0		ug/L			06/05/16 14:39	
Chloroform	0.60		1.0	0.60	-			06/05/16 14:39	
Chloromethane	0.83		1.0		ug/L			06/05/16 14:39	
sis-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 14:39	
sis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 14:39	
Dibromochloromethane	0.50		1.0		ug/L			06/05/16 14:39	
Dibromomethane	0.59		5.0		ug/L			06/05/16 14:39	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 14:39	
Ethylbenzene	0.50		1.0		ug/L			06/05/16 14:39	
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 14:39	
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 14:39	
odomethane	0.90		1.0		ug/L ug/L			06/05/16 14:39	
sopropyl ether	0.70		1.0		ug/L ug/L			06/05/16 14:39	
sopropyl etner sopropylbenzene	0.70		1.0		ug/L ug/L			06/05/16 14:39	
					_				
Methyl Ethyl Ketone methyl isobutyl ketone	2.6 1.8		25 25		ug/L ug/L			06/05/16 14:39 06/05/16 14:39	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-30

Matrix: Water

Client Sample ID: PRES-IW0007I-034.5-20160525 Date Collected: 05/25/16 14:07

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 14:39	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 14:39	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 14:39	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 14:39	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 14:39	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 14:39	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 14:39	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 14:39	1
sec-Butylbenzene	0.70	Ü	1.0	0.70	ug/L			06/05/16 14:39	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 14:39	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 14:39	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 14:39	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 14:39	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 14:39	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 14:39	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 14:39	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 14:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	88		78 - 118					06/05/16 14:39	1
Dibromofluoromethane	103		81 - 121					06/05/16 14:39	1
Toluene-d8 (Surr)	94		80 - 120					06/05/16 14:39	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-31

Matrix: Water

Client Sample ID: PRES-IW0009-045.0-20160525

Date Collected: 05/25/16 11:45 Date Received: 05/28/16 09:48

,1,1,2-Tetrachloroethane								
	0.52	U	1.0	0.52	ug/L		06/05/16 15:05	
,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L		06/05/16 15:05	
,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L		06/05/16 15:05	
,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L		06/05/16 15:05	
,1-Dichloroethane	0.50	U	1.0	0.50	ug/L		06/05/16 15:05	
,1-Dichloroethene	0.50	U	1.0	0.50	ug/L		06/05/16 15:05	
,1-Dichloropropene	0.50	U	1.0	0.50	ug/L		06/05/16 15:05	
,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L		06/05/16 15:05	
,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L		06/05/16 15:05	
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L		06/05/16 15:05	
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L		06/05/16 15:05	
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L		06/05/16 15:05	
,2-Dichlorobenzene	0.50		1.0	0.50	-		06/05/16 15:05	
,2-Dichloroethane	0.50	U	1.0	0.50	-		06/05/16 15:05	
,2-Dichloropropane	0.50	U	1.0	0.50	-		06/05/16 15:05	
,3,5-Trimethylbenzene	0.56		1.0	0.56	-		06/05/16 15:05	
,3-Dichlorobenzene	0.54	U	1.0	0.54	-		06/05/16 15:05	
,3-Dichloropropane	0.50	U	1.0	0.50	-		06/05/16 15:05	
,4-Dichlorobenzene	0.64		1.0	0.64	-		06/05/16 15:05	
,2-Dichloropropane	0.50		1.0	0.50	-		06/05/16 15:05	
-Chlorotoluene	0.57		1.0	0.57	-		06/05/16 15:05	
-Hexanone	3.1		25		ug/L		06/05/16 15:05	
-Chlorotoluene	0.56		1.0	0.56	-		06/05/16 15:05	
Acetone	11		25		ug/L		06/05/16 15:05	
Benzene	0.38		1.0	0.38	-		06/05/16 15:05	
Bromobenzene	0.54		1.0	0.54	-		06/05/16 15:05	
romochloromethane	0.52		1.0	0.52	-		06/05/16 15:05	
romodichloromethane	0.50		1.0	0.50	-		06/05/16 15:05	
romoform	0.71		5.0	0.71	-		06/05/16 15:05	
romomethane	0.98		1.0	0.98			06/05/16 15:05	
Carbon disulfide	0.52		1.0	0.50	-		06/05/16 15:05	
Carbon tetrachloride	0.50		1.0	0.50	-		06/05/16 15:05	
Chlorobenzene	0.50		1.0	0.50			06/05/16 15:05	
Chloroethane	0.76		1.0	0.76	•		06/05/16 15:05	
Chloroform	0.60		1.0	0.60	-		06/05/16 15:05	
Chloromethane	0.83		1.0	0.83	J		06/05/16 15:05	
is-1,2-Dichloroethene	0.50		1.0		ug/L		06/05/16 15:05	
is-1,3-Dichloropropene	0.50		5.0		ug/L		06/05/16 15:05	
Dibromochloromethane	0.50		1.0		ug/L		06/05/16 15:05	
Dibromomethane	0.59		5.0		ug/L		06/05/16 15:05	
Dichlorodifluoromethane	0.85		1.0		ug/L		06/05/16 15:05	
Ethylbenzene	0.50		1.0		ug/L ug/L		06/05/16 15:05	
· · · · · · · · · · · · · · · · · · ·					ug/L ug/L		06/05/16 15:05	
thylene Dibromide lexachlorobutadiene	0.50 0.90		1.0 5.0				06/05/16 15:05	
					ug/L			
odomethane	0.68		1.0		ug/L		06/05/16 15:05	
sopropyl ether	0.70		1.0		ug/L		06/05/16 15:05	
sopropylbenzene /lethyl Ethyl Ketone	0.53 2.6		1.0 25	0.53	ug/L ug/L		06/05/16 15:05 06/05/16 15:05	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-31

Client Sample ID: PRES-IW0009-045.0-20160525 Date Collected: 05/25/16 11:45 **Matrix: Water**

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 15:05	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 15:05	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 15:05	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 15:05	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 15:05	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 15:05	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 15:05	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 15:05	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 15:05	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 15:05	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 15:05	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 15:05	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 15:05	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 15:05	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 15:05	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 15:05	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 15:05	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 15:05	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 15:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			-		06/05/16 15:05	1
Dibromofluoromethane	101		81 - 121					06/05/16 15:05	1
Toluene-d8 (Surr)	92		80 - 120					06/05/16 15:05	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-32

Matrix: Water

Client Sample ID: PRES-IW0010-045.0-20160525

Date Collected: 05/25/16 13:53 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 15:31	
,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	
,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	
,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 15:31	
,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	
,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	
,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	
,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 15:31	
,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 15:31	
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 15:31	
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 15:31	
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 15:31	
,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	
,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	
,2-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 15:31	
,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/05/16 15:31	
,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/05/16 15:31	
,3-Dichloropropane	0.50		1.0	0.50	-			06/05/16 15:31	
,4-Dichlorobenzene	0.64	Ü	1.0	0.64	-			06/05/16 15:31	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/05/16 15:31	
2-Chlorotoluene	0.57		1.0	0.57	-			06/05/16 15:31	
2-Hexanone	3.1		25		ug/L			06/05/16 15:31	
-Chlorotoluene	0.56		1.0	0.56				06/05/16 15:31	
Acetone	11		25		ug/L			06/05/16 15:31	
Benzene	0.38		1.0	0.38				06/05/16 15:31	
Bromobenzene	0.54		1.0	0.54				06/05/16 15:31	
Bromochloromethane	0.52		1.0	0.52	-			06/05/16 15:31	
Bromodichloromethane	0.50		1.0	0.50	-			06/05/16 15:31	
Bromoform	0.30		5.0	0.71	ug/L			06/05/16 15:31	
Bromomethane	0.71		1.0	0.71	-			06/05/16 15:31	
Carbon disulfide	0.50			0.50	-			06/05/16 15:31	
	0.50		1.0		-				
Carbon tetrachloride			1.0	0.50	-			06/05/16 15:31	
Chlorobenzene	0.50		1.0	0.50	-			06/05/16 15:31	
Chloroethane	0.76		1.0	0.76				06/05/16 15:31	
Chloroform	0.60		1.0	0.60	-			06/05/16 15:31	
Chloromethane	0.83		1.0	0.83				06/05/16 15:31	
is-1,2-Dichloroethene	0.50		1.0	0.50				06/05/16 15:31	
is-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 15:31	
Dibromochloromethane	0.50		1.0		ug/L			06/05/16 15:31	
Dibromomethane	0.59		5.0	0.59				06/05/16 15:31	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 15:31	
Ethylbenzene	0.50		1.0	0.50				06/05/16 15:31	
Ethylene Dibromide	0.50		1.0	0.50				06/05/16 15:31	
lexachlorobutadiene	0.90		5.0		ug/L			06/05/16 15:31	
odomethane	0.68		1.0		ug/L			06/05/16 15:31	
sopropyl ether	0.70		1.0	0.70				06/05/16 15:31	
sopropylbenzene	0.53		1.0	0.53	-			06/05/16 15:31	
/lethyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/05/16 15:31	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-32

Matrix: Water

Client Sample ID: PRES-IW0010-045.0-20160525
Date Collected: 05/25/16 13:53

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	\overline{U}	1.0	0.74	ug/L			06/05/16 15:31	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 15:31	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 15:31	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 15:31	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 15:31	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 15:31	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 15:31	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 15:31	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 15:31	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 15:31	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 15:31	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 15:31	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 15:31	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 15:31	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 15:31	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 15:31	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 15:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		78 - 118			-		06/05/16 15:31	1
Dibromofluoromethane	101		81 - 121					06/05/16 15:31	1
Toluene-d8 (Surr)	93		80 - 120					06/05/16 15:31	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-33

Matrix: Water

Client Sample ID: SATV-IW0009I-024.5-20160525 Date Collected: 05/25/16 15:28

Date Received: 05/28/16 09:48

Method: 8260B - Volatile Org Analyte		Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52		1.0	0.52	ug/L			06/05/16 15:57	1
1,1,1-Trichloroethane	0.50	U	1.0		ug/L			06/05/16 15:57	1
1,1,2,2-Tetrachloroethane	0.50		1.0		ug/L			06/05/16 15:57	1
1,1,2-Trichloroethane	0.50		5.0		ug/L			06/05/16 15:57	1
1,1-Dichloroethane	0.50		1.0		ug/L			06/05/16 15:57	1
1,1-Dichloroethene	0.50		1.0		ug/L			06/05/16 15:57	1
1,1-Dichloropropene	0.50		1.0		ug/L			06/05/16 15:57	· · · · · · · · · · · · · · · · · · ·
1,2,3-Trichlorobenzene	0.70		1.0		ug/L			06/05/16 15:57	1
1,2,3-Trichloropropane	0.84		5.0		ug/L			06/05/16 15:57	1
1,2,4-Trichlorobenzene	0.82		1.0		ug/L			06/05/16 15:57	
1,2,4-Trimethylbenzene	0.82		1.0		ug/L			06/05/16 15:57	1
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/05/16 15:57	1
1,2-Dichlorobenzene	0.50		1.0		ug/L			06/05/16 15:57	
1,2-Dichloroethane	0.50		1.0		ug/L			06/05/16 15:57	1
1,2-Dichloropropane	0.50		1.0		ug/L			06/05/16 15:57	1
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/05/16 15:57	' 1
1,3-Dichlorobenzene	0.54		1.0		ug/L ug/L			06/05/16 15:57	1
1,3-Dichloropropane	0.54		1.0		ug/L ug/L			06/05/16 15:57	1
	0.50				ug/L ug/L			06/05/16 15:57	
1,4-Dichlorobenzene	0.50		1.0 1.0		ug/L ug/L			06/05/16 15:57	1
2,2-Dichloropropane	0.50				-				1
2-Chlorotoluene	3.1		1.0		ug/L			06/05/16 15:57 06/05/16 15:57	' 1
2-Hexanone	0.56		25 1.0		ug/L				
4-Chlorotoluene					ug/L			06/05/16 15:57	1
Acetone	11		25		ug/L			06/05/16 15:57	1
Benzene	0.38		1.0		ug/L			06/05/16 15:57	1
Bromobenzene	0.54		1.0		ug/L			06/05/16 15:57	1
Bromochloromethane	0.52		1.0		ug/L			06/05/16 15:57	1
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 15:57	1
Bromoform	0.71		5.0		ug/L			06/05/16 15:57	1
Bromomethane	0.98		1.0		ug/L			06/05/16 15:57	1
Carbon disulfide	0.98		1.0		ug/L			06/05/16 15:57	1
Carbon tetrachloride	0.50		1.0		ug/L			06/05/16 15:57	1
Chlorobenzene	0.50		1.0		ug/L			06/05/16 15:57	
Chloroethane	0.76		1.0		ug/L			06/05/16 15:57	1
Chloroform	0.60		1.0		ug/L			06/05/16 15:57	1
Chloromethane	0.83	U	1.0		ug/L			06/05/16 15:57	
cis-1,2-Dichloroethene	2.7		1.0		ug/L			06/05/16 15:57	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 15:57	1
Dibromochloromethane	0.50		1.0		ug/L			06/05/16 15:57	1
Dibromomethane	0.59		5.0		ug/L			06/05/16 15:57	1
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 15:57	1
Ethylbenzene	0.50		1.0		ug/L			06/05/16 15:57	1
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 15:57	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/05/16 15:57	1
lodomethane	0.68		1.0		ug/L			06/05/16 15:57	1
Isopropyl ether	0.70		1.0	0.70	ug/L			06/05/16 15:57	1
Isopropylbenzene	0.53	U	1.0		ug/L			06/05/16 15:57	1
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/05/16 15:57	1
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/05/16 15:57	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 15:28

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-33

Client Sample ID: SATV-IW0009I-024.5-20160525

Matrix: Water

Method: 8260B - Volatile (Organic Compou	MS) (Continue	d)	
Analyte	Result	Qualifier	PQL	M
Methyl tert-butyl ether	0.74	U	1.0	

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 15:57	
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 15:57	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 15:57	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 15:57	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 15:57	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 15:57	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 15:57	•
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 15:57	•
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 15:57	•
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 15:57	•
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 15:57	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 15:57	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 15:57	1
trans-1,2-Dichloroethene	2.7		1.0	0.50	ug/L			06/05/16 15:57	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 15:57	•
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 15:57	•
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 15:57	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 15:57	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 15:57	•

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118	-		06/05/16 15:57	1
Dibromofluoromethane	104		81 - 121			06/05/16 15:57	1
Toluene-d8 (Surr)	94		80 - 120			06/05/16 15:57	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 15:40

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-34

Matrix: Water

Date Received: 05/28/16 09:48	

Client Sample ID: SATV-IW00010-040.0-20160525

Method: 8260B - Volatile Orga ^{Analyte}	Result	Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 16:23	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	-			06/05/16 16:23	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 16:23	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 16:23	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 16:23	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 16:23	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 16:23	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 16:23	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 16:23	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 16:23	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 16:23	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 16:23	
1,2-Dichlorobenzene	0.50	Ü	1.0	0.50	ug/L			06/05/16 16:23	
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 16:23	
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/05/16 16:23	
1,3,5-Trimethylbenzene	0.56	Ü	1.0	0.56	-			06/05/16 16:23	
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/05/16 16:23	
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/05/16 16:23	
1,4-Dichlorobenzene	0.64	U	1.0	0.64	-			06/05/16 16:23	
2,2-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 16:23	
2-Chlorotoluene	0.57	U	1.0	0.57	-			06/05/16 16:23	
2-Hexanone	3.1	U	25		ug/L			06/05/16 16:23	
1-Chlorotoluene	0.56	U	1.0	0.56	-			06/05/16 16:23	
Acetone	10	U	25		ug/L			06/05/16 16:23	
Benzene	0.38		1.0	0.38	-			06/05/16 16:23	
Bromobenzene	0.54	U	1.0	0.54	-			06/05/16 16:23	
Bromochloromethane	0.52	U	1.0	0.52	-			06/05/16 16:23	
Bromodichloromethane	0.50	Ü	1.0		ug/L			06/05/16 16:23	
Bromoform	0.71		5.0	0.71	-			06/05/16 16:23	
Bromomethane	0.98		1.0	0.98	_			06/05/16 16:23	
Carbon disulfide	0.72		1.0	0.50				06/05/16 16:23	
Carbon tetrachloride	0.50		1.0	0.50				06/05/16 16:23	
Chlorobenzene	0.50		1.0	0.50	-			06/05/16 16:23	
Chloroethane	0.76		1.0	0.76	-			06/05/16 16:23	
Chloroform	0.60		1.0	0.60	-			06/05/16 16:23	
Chloromethane	0.83		1.0	0.83	_			06/05/16 16:23	
cis-1,2-Dichloroethene	0.50		1.0	0.50				06/05/16 16:23	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 16:23	
Dibromochloromethane	0.50		1.0		ug/L			06/05/16 16:23	
Dibromomethane	0.59		5.0		ug/L			06/05/16 16:23	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/05/16 16:23	
Ethylbenzene	0.50		1.0		ug/L ug/L			06/05/16 16:23	
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 16:23	
Hexachlorobutadiene	0.90		5.0		ug/L ug/L			06/05/16 16:23	
odomethane	0.90		1.0		ug/L ug/L			06/05/16 16:23	
sopropyl ether	0.70		1.0		ug/L			06/05/16 16:23	
sopropylbenzene	0.53		1.0		ug/L			06/05/16 16:23	
Methyl Ethyl Ketone	2.6	11	25	~ ~	ug/L			06/05/16 16:23	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Methyl tert-butyl ether

Methylene Chloride

Naphthalene

n-Butylbenzene

m-Xylene & p-Xylene

Analyte

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-34

Client Sample ID: SATV-IW00010-040.0-20160525 Date Collected: 05/25/16 15:40 **Matrix: Water**

PQL

1.0

5.0

5.0

1.0

1.0

MDL Unit

0.74 ug/L

3.0 ug/L

1.6 ug/L

1.0 ug/L

0.76 ug/L

Date Received: 05/28/16 09:48

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Result Qualifier

0.74 U

3.0 U

1.6 U

1.0 U

0.76 U

D	Prepared	Analyzed	Dil Fac	
		06/05/16 16:23	1	
		06/05/16 16:23	1	
		06/05/16 16:23	1	
		06/05/16 16:23	1	•
		06/05/16 16:23	1	
		06/05/16 16:23	1	
		06/05/16 16:23	1	
		06/05/16 16:23	1	
		06/05/16 16:23	1	
		06/05/16 16:23	1	

			<u> </u>	
N-Propylbenzene	0.69 U	1.0	0.69 ug/L	06/05/16 16:23
o-Xylene	0.60 U	5.0	0.60 ug/L	06/05/16 16:23
p-Cymene	0.71 U	1.0	0.71 ug/L	06/05/16 16:23
sec-Butylbenzene	0.70 U	1.0	0.70 ug/L	06/05/16 16:23
Styrene	1.0 U	1.0	1.0 ug/L	06/05/16 16:23
tert-Butylbenzene	0.63 U	1.0	0.63 ug/L	06/05/16 16:23
Tetrachloroethene	0.58 U	1.0	0.58 ug/L	06/05/16 16:23
Toluene	0.70 U	1.0	0.70 ug/L	06/05/16 16:23
trans-1,2-Dichloroethene	0.50 U	1.0	0.50 ug/L	06/05/16 16:23
trans-1,3-Dichloropropene	0.50 U	5.0	0.50 ug/L	06/05/16 16:23
Trichloroethene	0.50 U	1.0	0.50 ug/L	06/05/16 16:23
Trichlorofluoromethane	0.52 U	1.0	0.52 ug/L	06/05/16 16:23
Vinyl acetate	2.0 U	25	2.0 ug/L	06/05/16 16:23
Vinyl chloride	0.50 U	1.0	0.50 ug/L	06/05/16 16:23

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		78 - 118		06/05/16 16:23	1
Dibromofluoromethane	102		81 - 121		06/05/16 16:23	1
Toluene-d8 (Surr)	93		80 - 120		06/05/16 16:23	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:45

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-35

Matrix: Water

Mothod: 9260B	Volatile	Organic	Compounds	(CC/MC)

Client Sample ID: WCPS-IW0001SR-007.5-20160526

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/05/16 16:49	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 16:49	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 16:49	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 16:49	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/05/16 16:49	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 16:49	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 16:49	
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	
1,2-Dichloroethane	0.50	U	1.0	0.50				06/05/16 16:49	
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 16:49	
1,3,5-Trimethylbenzene	0.56		1.0	0.56				06/05/16 16:49	
1,3-Dichlorobenzene	0.54		1.0	0.54	-			06/05/16 16:49	
1,3-Dichloropropane	0.50	U	1.0	0.50	-			06/05/16 16:49	
1,4-Dichlorobenzene	0.64		1.0	0.64				06/05/16 16:49	
2,2-Dichloropropane	0.50		1.0	0.50				06/05/16 16:49	
2-Chlorotoluene	0.57		1.0	0.57	_			06/05/16 16:49	
2-Hexanone	3.1		25	3.1	ug/L			06/05/16 16:49	
4-Chlorotoluene	0.56		1.0	0.56	•			06/05/16 16:49	
Acetone	12		25		ug/L			06/05/16 16:49	
Benzene	0.38		1.0	0.38	-			06/05/16 16:49	
Bromobenzene	0.54		1.0	0.54	-			06/05/16 16:49	
Bromochloromethane	0.52		1.0	0.52	-			06/05/16 16:49	
Bromodichloromethane	0.50		1.0		ug/L			06/05/16 16:49	
Bromoform	0.71		5.0	0.71	_			06/05/16 16:49	
Bromomethane	0.98		1.0	0.98	•			06/05/16 16:49	
Carbon disulfide	0.62		1.0	0.50				06/05/16 16:49	
Carbon tetrachloride	0.50		1.0	0.50	-			06/05/16 16:49	
Chlorobenzene	0.50		1.0	0.50	-			06/05/16 16:49	
Chloroethane	0.76		1.0	0.76				06/05/16 16:49	
Chloroform	0.60		1.0	0.60	-			06/05/16 16:49	
Chloromethane	0.83		1.0	0.83	-			06/05/16 16:49	
cis-1,2-Dichloroethene	9.0		1.0	0.50				06/05/16 16:49	
cis-1,3-Dichloropropene	0.50	ш	5.0	0.50				06/05/16 16:49	
Dibromochloromethane	0.50		1.0		ug/L ug/L			06/05/16 16:49	
Dibromomethane	0.50		5.0		ug/L ug/L			06/05/16 16:49	
Dichlorodifluoromethane	0.85							06/05/16 16:49	
Ethylbenzene	0.50		1.0 1.0	0.85	•			06/05/16 16:49	
·	0.50			0.50				06/05/16 16:49	
Ethylene Dibromide			1.0		ug/L				
Hexachlorobutadiene	0.90		5.0	0.90	-			06/05/16 16:49	
lodomethane	0.68		1.0	0.68				06/05/16 16:49	
Isopropyl ether	0.70		1.0		ug/L			06/05/16 16:49	
Isopropylbenzene	0.53		1.0		ug/L			06/05/16 16:49	
Methyl Ethyl Ketone	2.6	U	25		ug/L ug/L			06/05/16 16:49	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-35

Matrix: Water

Client Sample ID: WCDS_IW0001SD_007 5_20160526
Client Sample ID: WCPS-IW0001SR-007.5-20160526
•

Date Collected: 05/26/16 11:45 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 16:49	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 16:49	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 16:49	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 16:49	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 16:49	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 16:49	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 16:49	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 16:49	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 16:49	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 16:49	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 16:49	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 16:49	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 16:49	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 16:49	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 16:49	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 16:49	1
Vinyl acetate	2.0	Ü	25	2.0	ug/L			06/05/16 16:49	1
Vinyl chloride	28		1.0	0.50	ug/L			06/05/16 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			-		06/05/16 16:49	1
Dibromofluoromethane	103		81 - 121					06/05/16 16:49	1
Toluene-d8 (Surr)	91		80 - 120					06/05/16 16:49	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:40

Client Sample ID: WCPS-IW0016-020.0-20160526

Project/Site: VAB-LTM

methyl isobutyl ketone

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-36

Matrix: Water

Method: 8260B - Volatile Org					_		
Analyte	Result Q			Unit	D	Prepared Analyze	
1,1,1,2-Tetrachloroethane	0.52 U			ug/L		06/05/16 17	
1,1,1-Trichloroethane	0.50 U			ug/L		06/05/16 17	
1,1,2,2-Tetrachloroethane	0.50 U			ug/L		06/05/16 17	
I,1,2-Trichloroethane	0.50 U			ug/L		06/05/16 17	
1,1-Dichloroethane	0.50 U			ug/L		06/05/16 17	
1,1-Dichloroethene	0.50 U			ug/L		06/05/16 17	
1,1-Dichloropropene	0.50 U			ug/L		06/05/16 17	
1,2,3-Trichlorobenzene	0.70 U			ug/L		06/05/16 17	
1,2,3-Trichloropropane	0.84 U			ug/L		06/05/16 17	7:15
1,2,4-Trichlorobenzene	0.82 U		0.82	ug/L		06/05/16 17	7:15
1,2,4-Trimethylbenzene	0.82 U	1.0		ug/L		06/05/16 17	7:15
1,2-Dibromo-3-Chloropropane	1.5 U	5.0	1.5	ug/L		06/05/16 17	7:15
1,2-Dichlorobenzene	0.50 U			ug/L		06/05/16 17	7:15
1,2-Dichloroethane	0.50 U	1.0		ug/L		06/05/16 17	7:15
1,2-Dichloropropane	0.50 U	1.0	0.50	ug/L		06/05/16 17	' :15
1,3,5-Trimethylbenzene	0.56 U	1.0	0.56	ug/L		06/05/16 17	7:15
1,3-Dichlorobenzene	0.54 U	1.0	0.54	ug/L		06/05/16 17	' :15
1,3-Dichloropropane	0.50 U	1.0	0.50	ug/L		06/05/16 17	7:15
1,4-Dichlorobenzene	0.64 U	1.0	0.64	ug/L		06/05/16 17	7:15
2,2-Dichloropropane	0.50 U	1.0	0.50	ug/L		06/05/16 17	7:15
2-Chlorotoluene	0.57 U	1.0	0.57	ug/L		06/05/16 17	7:15
2-Hexanone	3.1 U	25	3.1	ug/L		06/05/16 17	7:15
I-Chlorotoluene	0.56 U	1.0	0.56	ug/L		06/05/16 17	7:15
Acetone	17 I	25	10	ug/L		06/05/16 17	7:15
Benzene	0.38 U	1.0		ug/L		06/05/16 17	7:15
Bromobenzene	0.54 U	1.0		ug/L		06/05/16 17	' :15
Bromochloromethane	0.52 U	1.0		ug/L		06/05/16 17	7:15
Bromodichloromethane	0.50 U	1.0		ug/L		06/05/16 17	':15
Bromoform	0.71 U	5.0		ug/L		06/05/16 17	' :15
Bromomethane	0.98 U			ug/L		06/05/16 17	
Carbon disulfide	0.93	1.0		ug/L		06/05/16 17	
Carbon tetrachloride	0.50 U			ug/L		06/05/16 17	
Chlorobenzene	0.50 U			ug/L		06/05/16 17	
Chloroethane	0.76 U			ug/L		06/05/16 17	
Chloroform	0.60 U			ug/L		06/05/16 17	
Chloromethane	0.83 U			ug/L		06/05/16 17	
cis-1,2-Dichloroethene	6.0	1.0		ug/L		06/05/16 17	
cis-1,3-Dichloropropene	0.50 U			ug/L		06/05/16 17	
Dibromochloromethane	0.50 U			ug/L ug/L		06/05/16 17	
Dibromomethane	0.59 U					06/05/16 17	
Dichlorodifluoromethane	0.59 U 0.85 U			ug/L ug/L		06/05/16 17	
	0.50 U			-		06/05/16 17	
Ethylbenzene				ug/L			
Ethylene Dibromide	0.50 U			ug/L		06/05/16 17	
Hexachlorobutadiene	0.90 U			ug/L		06/05/16 17	
odomethane	0.68 U			ug/L		06/05/16 17	
sopropyl ether	0.70 U			ug/L		06/05/16 17	
sopropylbenzene	0.53 U			ug/L		06/05/16 17	
Methyl Ethyl Ketone	2.6 U	25	2.6	ug/L		06/05/16 17	7:15

TestAmerica Pensacola

06/05/16 17:15

25

1.8 ug/L

1.8 U

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 11:40

Date Received: 05/28/16 09:48

Client Sample ID: WCPS-IW0016-020.0-20160526

102

90

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-36

Matrix: Water

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/05/16 17:15	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/05/16 17:15	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/05/16 17:15	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/05/16 17:15	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/05/16 17:15	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/05/16 17:15	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/05/16 17:15	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/05/16 17:15	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/05/16 17:15	1
Styrene	1.0	U	1.0	1.0	ug/L			06/05/16 17:15	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/05/16 17:15	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/05/16 17:15	1
Toluene	0.70	U	1.0	0.70	ug/L			06/05/16 17:15	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 17:15	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/05/16 17:15	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 17:15	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/05/16 17:15	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/05/16 17:15	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/05/16 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		78 - 118			•		06/05/16 17:15	1

81 - 121

80 - 120

06/05/16 17:15

06/05/16 17:15

Client: Geosyntec Consultants, Inc.

Date Collected: 05/24/16 11:55

Date Received: 05/28/16 09:48

Client Sample ID: MLPV-SAMW0001-045.5-20160524

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-37

Matrix: Water

Analyte		Qualifier	PQL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 10:49	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:49	•
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:49	
,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 10:49	1
,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:49	•
I,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 10:49	
1,1-Dichloropropene	0.50	Ü	1.0	0.50	ug/L			06/04/16 10:49	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 10:49	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 10:49	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 10:49	
1,2,4-Trimethylbenzene	0.82	U	1.0		ug/L			06/04/16 10:49	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/04/16 10:49	
1,2-Dichlorobenzene	0.50	U	1.0	0.50				06/04/16 10:49	
1,2-Dichloroethane	0.50		1.0		ug/L			06/04/16 10:49	
1,2-Dichloropropane	0.50		1.0	0.50	-			06/04/16 10:49	
1,3,5-Trimethylbenzene	0.56		1.0	0.56	_			06/04/16 10:49	· · · · · · .
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/04/16 10:49	
1,3-Dichloropropane	0.50		1.0		ug/L			06/04/16 10:49	
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/04/16 10:49	
2,2-Dichloropropane	0.50		1.0		ug/L			06/04/16 10:49	
2-Chlorotoluene	0.57		1.0		ug/L			06/04/16 10:49	
2-Hexanone	3.1		25		ug/L			06/04/16 10:49	
I-Chlorotoluene	0.56		1.0		ug/L			06/04/16 10:49	
Acetone	10		25		ug/L			06/04/16 10:49	
Benzene	0.38		1.0	0.38	.			06/04/16 10:49	
Bromobenzene	0.54		1.0		ug/L			06/04/16 10:49	
Bromochloromethane	0.52		1.0		ug/L			06/04/16 10:49	
Bromodichloromethane	0.50		1.0		ug/L			06/04/16 10:49	
Bromoform	0.71		5.0	0.30	-			06/04/16 10:49	
Bromomethane	0.71		1.0		ug/L ug/L			06/04/16 10:49	
					ug/L ug/L			06/04/16 10:49	
Carbon disulfide Carbon tetrachloride	4.7 0.50		1.0 1.0		ug/L ug/L				
					_			06/04/16 10:49	
Chlorobenzene	0.50		1.0	0.50	-			06/04/16 10:49	
Chloroethane	0.76		1.0		ug/L			06/04/16 10:49	
Chloroform	0.60		1.0		ug/L			06/04/16 10:49	
Chloromethane	0.83		1.0		ug/L			06/04/16 10:49	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/04/16 10:49	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 10:49	
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 10:49	
Dibromomethane	0.59		5.0		ug/L			06/04/16 10:49	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 10:49	
Ethylbenzene	0.50		1.0		ug/L			06/04/16 10:49	
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 10:49	
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 10:49	
odomethane	0.68		1.0		ug/L			06/04/16 10:49	
sopropyl ether	0.70		1.0		ug/L			06/04/16 10:49	
sopropylbenzene	0.53	U	1.0	0.53	ug/L			06/04/16 10:49	•
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/04/16 10:49	
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/04/16 10:49	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-37

Matrix: Water

Client	Sample	ID: MLF	V-SAMWO	0001-045.5	-20160524

Date Collected: 05/24/16 11:55 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 10:49	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 10:49	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 10:49	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 10:49	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 10:49	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 10:49	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 10:49	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 10:49	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 10:49	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 10:49	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 10:49	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 10:49	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 10:49	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 10:49	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 10:49	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 10:49	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 10:49	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 10:49	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 10:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		78 - 118			-		06/04/16 10:49	1
Dibromofluoromethane	94		81 - 121					06/04/16 10:49	1
Toluene-d8 (Surr)	102		80 - 120					06/04/16 10:49	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-38

Matrix: Water

Client Sample ID: MLPV-SAMW0003-045.5-20160524 Date Collected: 05/24/16 13:19

Date Received: 05/28/16 09:48

Method: 8260B - Volatile Orga Analyte		Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U -	1.0	0.52	ug/L	— – ·	•	06/04/16 11:14	
1,1,1-Trichloroethane	0.50		1.0		ug/L			06/04/16 11:14	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	-			06/04/16 11:14	
1,1,2-Trichloroethane	0.50	Ü	5.0	0.50	-			06/04/16 11:14	
1,1-Dichloroethane	0.50		1.0	0.50	_			06/04/16 11:14	
1,1-Dichloroethene	0.50		1.0	0.50	•			06/04/16 11:14	
1,1-Dichloropropene	0.50		1.0	0.50	-			06/04/16 11:14	
1,2,3-Trichlorobenzene	0.70		1.0	0.70	-			06/04/16 11:14	
1,2,3-Trichloropropane	0.84		5.0	0.84	-			06/04/16 11:14	
1,2,4-Trichlorobenzene	0.82		1.0	0.82	-			06/04/16 11:14	
1,2,4-Trimethylbenzene	0.82		1.0	0.82	-			06/04/16 11:14	
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/04/16 11:14	
1,2-Dichlorobenzene	0.50		1.0	0.50	-			06/04/16 11:14	
1,2-Dichloroethane	0.50		1.0	0.50	-			06/04/16 11:14	
1,2-Dichloropropane	0.50		1.0	0.50	-			06/04/16 11:14	
1,3,5-Trimethylbenzene	0.56		1.0	0.56	-			06/04/16 11:14	
1,3-Dichlorobenzene	0.54		1.0	0.54	-			06/04/16 11:14	
1,3-Dichloropropane	0.54		1.0	0.50	_			06/04/16 11:14	
1,4-Dichlorobenzene	0.64		1.0	0.64				06/04/16 11:14	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/04/16 11:14	
2-Chlorotoluene	0.57		1.0					06/04/16 11:14	
	3.1		25	0.57 3.1				06/04/16 11:14	
2-Hexanone	0.56				ug/L				
I-Chlorotoluene	10		1.0 25	0.56	-			06/04/16 11:14	
Acetone					ug/L			06/04/16 11:14	
Benzene	0.38		1.0	0.38	-			06/04/16 11:14	
Bromobenzene	0.54		1.0	0.54	-			06/04/16 11:14	
Bromochloromethane	0.52		1.0	0.52	-			06/04/16 11:14	
Bromodichloromethane	0.50		1.0	0.50	-			06/04/16 11:14	
Bromoform	0.71		5.0	0.71	_			06/04/16 11:14	
Bromomethane	0.98		1.0	0.98	•			06/04/16 11:14	
Carbon disulfide	1.2		1.0	0.50	_			06/04/16 11:14	
Carbon tetrachloride	0.50		1.0	0.50	•			06/04/16 11:14	
Chlorobenzene	0.50		1.0	0.50	-			06/04/16 11:14	
Chloroethane	0.76		1.0	0.76	-			06/04/16 11:14	
Chloroform	0.60		1.0	0.60	_			06/04/16 11:14	
Chloromethane	0.83	U	1.0		ug/L			06/04/16 11:14	
cis-1,2-Dichloroethene	86		1.0		ug/L			06/04/16 11:14	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/04/16 11:14	
Dibromochloromethane	0.50		1.0		ug/L			06/04/16 11:14	
Dibromomethane	0.59		5.0		ug/L			06/04/16 11:14	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/04/16 11:14	
Ethylbenzene	0.50		1.0		ug/L			06/04/16 11:14	
Ethylene Dibromide	0.50		1.0		ug/L			06/04/16 11:14	
Hexachlorobutadiene	0.90		5.0		ug/L			06/04/16 11:14	
odomethane	0.73		1.0		ug/L			06/04/16 11:14	
sopropyl ether	0.70	U	1.0	0.70	ug/L			06/04/16 11:14	
sopropylbenzene	0.53	U	1.0	0.53	•			06/04/16 11:14	
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/04/16 11:14	

Client: Geosyntec Consultants, Inc.

Date Collected: 05/24/16 13:19

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-38

Client Sample ID: MLPV-SAMW0003-045.5-20160524

Matrix: Water

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 11:14	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 11:14	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 11:14	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 11:14	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 11:14	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 11:14	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 11:14	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 11:14	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 11:14	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 11:14	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 11:14	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 11:14	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 11:14	1
trans-1,2-Dichloroethene	3.9		1.0	0.50	ug/L			06/04/16 11:14	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 11:14	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 11:14	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 11:14	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 11:14	1
Vinyl chloride	80		1.0	0.50	ug/L			06/04/16 11:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		78 - 118			-		06/04/16 11:14	1

81 - 121

80 - 120

93

102

06/04/16 11:14

06/04/16 11:14

Client: Geosyntec Consultants, Inc.

Date Collected: 05/25/16 10:03

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-39

Matrix: Water

_			
Method: 8260B	- Volatile O	rganic Com	nounds (GC/MS)

Client Sample ID: FS6-MW0001-030.0-20160525

Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 16:48	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 16:48	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 16:48	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 16:48	1
1,2,4-Trichlorobenzene	0.82	U	1.0		ug/L			06/06/16 16:48	1
1,2,4-Trimethylbenzene	0.82	U	1.0		ug/L			06/06/16 16:48	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0		ug/L			06/06/16 16:48	1
1,2-Dichlorobenzene	0.50	Ü	1.0		ug/L			06/06/16 16:48	1
1,2-Dichloroethane	0.50		1.0		ug/L			06/06/16 16:48	1
1,2-Dichloropropane	0.50		1.0		ug/L			06/06/16 16:48	1
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/06/16 16:48	1
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/06/16 16:48	1
1,3-Dichloropropane	0.50		1.0		ug/L			06/06/16 16:48	1
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/06/16 16:48	
2,2-Dichloropropane	0.50		1.0		ug/L			06/06/16 16:48	1
2-Chlorotoluene	0.57		1.0		ug/L			06/06/16 16:48	1
2-Hexanone	3.1		25		ug/L			06/06/16 16:48	
4-Chlorotoluene	0.56		1.0		ug/L			06/06/16 16:48	1
Acetone	10		25		ug/L			06/06/16 16:48	1
Benzene	0.38		1.0		ug/L ug/L			06/06/16 16:48	<mark>'</mark>
Bromobenzene	0.54		1.0		ug/L ug/L			06/06/16 16:48	1
Bromochloromethane	0.54		1.0		ug/L ug/L			06/06/16 16:48	1
	0.52				-				
Bromodichloromethane Bromoform	0.50		1.0		ug/L			06/06/16 16:48	1
			5.0		ug/L			06/06/16 16:48	1
Bromomethane	0.98		1.0		ug/L			06/06/16 16:48	
Carbon disulfide	0.50		1.0		ug/L			06/06/16 16:48	1
Carbon tetrachloride	0.50		1.0		ug/L			06/06/16 16:48	1
Chlorobenzene	0.50		1.0		ug/L			06/06/16 16:48	
Chloroethane	0.76		1.0		ug/L			06/06/16 16:48	1
Chloroform	0.60		1.0		ug/L			06/06/16 16:48	1
Chloromethane	0.83	U	1.0		ug/L			06/06/16 16:48	
cis-1,2-Dichloroethene	2.6		1.0		ug/L			06/06/16 16:48	1
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 16:48	1
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 16:48	1
Dibromomethane	0.59		5.0		ug/L			06/06/16 16:48	1
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 16:48	1
Ethylbenzene	0.50		1.0		ug/L			06/06/16 16:48	1
Ethylene Dibromide	0.50		1.0		ug/L			06/06/16 16:48	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/06/16 16:48	1
Iodomethane	0.68		1.0		ug/L			06/06/16 16:48	1
Isopropyl ether	0.70		1.0	0.70	ug/L			06/06/16 16:48	1
Isopropylbenzene	0.53	U	1.0	0.53	ug/L			06/06/16 16:48	1
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/06/16 16:48	1
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/06/16 16:48	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-39

Client Sample ID: FS6-MW0001-030.0-20160525 Matrix: Water

Date Collected: 05/25/16 10:03 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 16:48	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 16:48	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 16:48	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 16:48	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 16:48	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 16:48	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 16:48	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 16:48	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 16:48	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 16:48	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 16:48	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 16:48	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 16:48	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 16:48	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 16:48	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 16:48	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118					06/06/16 16:48	1
Dibromofluoromethane	109		81 - 121					06/06/16 16:48	1
Toluene-d8 (Surr)	93		80 - 120					06/06/16 16:48	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-40

Matrix: Water

Date Collected: 05/25/16 10:24 Date Received: 05/28/16 09:48

Client Sample ID: FS6-MW0003-025.0-20160525

Method: 8260B - Volatile Org Analyte		Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U –	1.0	0.52	ug/L		-	06/06/16 17:15	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 17:15	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	-			06/06/16 17:15	
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 17:15	
1,1-Dichloroethane	0.50	U	1.0		ug/L			06/06/16 17:15	
1,1-Dichloroethene	0.50	U	1.0	0.50	_			06/06/16 17:15	
1,1-Dichloropropene	0.50	U	1.0		ug/L			06/06/16 17:15	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	-			06/06/16 17:15	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	_			06/06/16 17:15	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	-			06/06/16 17:15	
1,2,4-Trimethylbenzene	0.82		1.0	0.82	-			06/06/16 17:15	
1,2-Dibromo-3-Chloropropane	1.5		5.0		ug/L			06/06/16 17:15	
1,2-Dichlorobenzene	0.50		1.0	0.50	-			06/06/16 17:15	
1,2-Dichloroethane	0.50		1.0	0.50	-			06/06/16 17:15	
1,2-Dichloropropane	0.50		1.0	0.50	-			06/06/16 17:15	
1,3,5-Trimethylbenzene	0.56		1.0	0.56	-			06/06/16 17:15	
1,3-Dichlorobenzene	0.54		1.0	0.54	_			06/06/16 17:15	
1,3-Dichloropropane	0.50	_	1.0	0.50	•			06/06/16 17:15	
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/06/16 17:15	
2,2-Dichloropropane	0.50		1.0	0.50	ū			06/06/16 17:15	
2-Chlorotoluene	0.57		1.0	0.57	_			06/06/16 17:15	
2-Hexanone	3.1		25		ug/L			06/06/16 17:15	
4-Chlorotoluene	0.56		1.0	0.56	_			06/06/16 17:15	
Acetone	12		25		ug/L			06/06/16 17:15	
Benzene	0.38		1.0	0.38	-			06/06/16 17:15	
Bromobenzene	0.54		1.0	0.54	-			06/06/16 17:15	
Bromochloromethane	0.54		1.0	0.52	-			06/06/16 17:15	
Bromodichloromethane	0.52		1.0		ug/L			06/06/16 17:15	
Bromoform	0.50		5.0	0.50	-			06/06/16 17:15	
Bromomethane	0.71		1.0	0.71	-			06/06/16 17:15	
Carbon disulfide	0.50			0.50	-			06/06/16 17:15	
	0.50		1.0 1.0		_			06/06/16 17:15	
Carbon tetrachloride				0.50	•				
Chlarathan	0.50		1.0	0.50	-			06/06/16 17:15	
Chloroethane	0.76 0.60		1.0	0.76	-			06/06/16 17:15	
Chloroform			1.0	0.60	_			06/06/16 17:15	
Chloromethane	0.83		1.0		ug/L			06/06/16 17:15	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/06/16 17:15	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 17:15	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 17:15	
Dibromomethane	0.59		5.0		ug/L			06/06/16 17:15	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 17:15	
Ethylbenzene	0.50		1.0		ug/L			06/06/16 17:15	
Ethylene Dibromide	0.50		1.0		ug/L			06/06/16 17:15	
Hexachlorobutadiene	0.90		5.0		ug/L			06/06/16 17:15	
odomethane	0.68		1.0		ug/L			06/06/16 17:15	
sopropyl ether	0.70		1.0		ug/L			06/06/16 17:15	
Isopropylbenzene	0.53		1.0		ug/L			06/06/16 17:15	
Methyl Ethyl Ketone	2.6	U	25		ug/L ug/L			06/06/16 17:15	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-40

Client Sample ID: FS6-MW0003-025.0-20160525 Date Collected: 05/25/16 10:24 Matrix: Water

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 17:15	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 17:15	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 17:15	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 17:15	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 17:15	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 17:15	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 17:15	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 17:15	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 17:15	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 17:15	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 17:15	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 17:15	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 17:15	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 17:15	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 17:15	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 17:15	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 17:15	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 17:15	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118			•		06/06/16 17:15	1
Dibromofluoromethane	107		81 - 121					06/06/16 17:15	1
Toluene-d8 (Surr)	94		80 - 120					06/06/16 17:15	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-41

Matrix: Water

Client Sample ID: FDTL-IW0007I-015.0-20160526

Date Collected: 05/26/16 13:15 Date Received: 05/28/16 09:48

Analyte		Qualifier	PQL		Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 17:41	
I,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 17:41	
I,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 17:41	
I,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 17:41	· · · · · · · · ·
I,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 17:41	
I,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 17:41	
I,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 17:41	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 17:41	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 17:41	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 17:41	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 17:41	
I,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 17:41	
I,2-Dichlorobenzene	0.50	Ü	1.0	0.50	ug/L			06/06/16 17:41	
I,2-Dichloroethane	0.50	U	1.0	0.50				06/06/16 17:41	
I,2-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 17:41	
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/06/16 17:41	
I,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/06/16 17:41	
I,3-Dichloropropane	0.50	U	1.0	0.50	_			06/06/16 17:41	
I,4-Dichlorobenzene	0.64	Ü	1.0	0.64	-			06/06/16 17:41	
2,2-Dichloropropane	0.50		1.0		ug/L			06/06/16 17:41	
2-Chlorotoluene	0.57		1.0		ug/L			06/06/16 17:41	
2-Hexanone	3.1		25		ug/L			06/06/16 17:41	
I-Chlorotoluene	0.56		1.0	0.56	-			06/06/16 17:41	
Acetone	10		25		ug/L			06/06/16 17:41	
Benzene	0.38		1.0	0.38				06/06/16 17:41	
Bromobenzene	0.54		1.0	0.54	-			06/06/16 17:41	
Bromochloromethane	0.52		1.0	0.52	-			06/06/16 17:41	
Bromodichloromethane	0.50		1.0		ug/L			06/06/16 17:41	
Bromoform	0.71		5.0	0.71	-			06/06/16 17:41	
Bromomethane	0.98		1.0	0.98	•			06/06/16 17:41	
Carbon disulfide	0.50		1.0		ug/L			06/06/16 17:41	
Carbon tetrachloride	0.50		1.0	0.50	-			06/06/16 17:41	
Chlorobenzene					-				
	0.50 0.76		1.0	0.50	ug/L ug/L			06/06/16 17:41 06/06/16 17:41	
Chloroethane			1.0		-				
Chloroform	0.60		1.0		ug/L			06/06/16 17:41	
Chloromethane	0.83	U	1.0		ug/L			06/06/16 17:41	
cis-1,2-Dichloroethene	8.0		1.0		ug/L			06/06/16 17:41	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 17:41	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 17:41	
Dibromomethane	0.59		5.0		ug/L			06/06/16 17:41	
Dichlorodifluoromethane	0.85		1.0	0.85	•			06/06/16 17:41	
Ethylbenzene	0.50		1.0		ug/L			06/06/16 17:41	
Ethylene Dibromide	0.50		1.0	0.50				06/06/16 17:41	
Hexachlorobutadiene	0.90		5.0		ug/L			06/06/16 17:41	
odomethane	0.68		1.0	0.68	-			06/06/16 17:41	
sopropyl ether	0.70		1.0		ug/L			06/06/16 17:41	
sopropylbenzene	0.53		1.0		ug/L			06/06/16 17:41	
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/06/16 17:41 06/06/16 17:41	

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 13:15

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-41

Client Sample ID: FDTL-IW0007I-015.0-20160526

Matrix: Water

Method: 8260B	Volatile O	rganic Con	nnounds (G(C/MS) (Conti	nued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 17:41	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 17:41	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 17:41	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 17:41	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 17:41	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 17:41	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 17:41	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 17:41	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 17:41	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 17:41	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 17:41	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 17:41	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 17:41	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 17:41	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 17:41	1
Trichloroethene	3.0		1.0	0.50	ug/L			06/06/16 17:41	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 17:41	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 17:41	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 17:41	1

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118	-		06/06/16 17:41	1
Dibromofluoromethane	109		81 - 121			06/06/16 17:41	1
Toluene-d8 (Surr)	92		80 - 120			06/06/16 17:41	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 13:35

Client Sample ID: FDTL-IW0008I-015.0-20160526

Project/Site: VAB-LTM

methyl isobutyl ketone

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-42

Matrix: Water

Method: 8260B - Volatile Org	anic Compou	nds (GC/MS	S)						
Analyte	Result C	Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52 U		1.0	0.52	-			06/06/16 18:08	•
1,1,1-Trichloroethane	0.50 L		1.0	0.50	-			06/06/16 18:08	•
1,1,2,2-Tetrachloroethane	0.50 L	J	1.0		ug/L			06/06/16 18:08	1
1,1,2-Trichloroethane	0.50 L	j	5.0	0.50	ug/L			06/06/16 18:08	1
1,1-Dichloroethane	0.50 L	J	1.0	0.50	ug/L			06/06/16 18:08	1
1,1-Dichloroethene	0.50 L	J	1.0		ug/L			06/06/16 18:08	1
1,1-Dichloropropene	0.50 L	j	1.0	0.50	ug/L			06/06/16 18:08	1
1,2,3-Trichlorobenzene	0.70 L	J	1.0	0.70	ug/L			06/06/16 18:08	1
1,2,3-Trichloropropane	0.84 L	J	5.0	0.84	ug/L			06/06/16 18:08	1
1,2,4-Trichlorobenzene	0.82 L	j	1.0	0.82	ug/L			06/06/16 18:08	1
1,2,4-Trimethylbenzene	0.82 L	J	1.0	0.82	ug/L			06/06/16 18:08	1
1,2-Dibromo-3-Chloropropane	1.5 L	J	5.0	1.5	ug/L			06/06/16 18:08	1
1,2-Dichlorobenzene	0.50 L	j	1.0	0.50	ug/L			06/06/16 18:08	1
1,2-Dichloroethane	0.50 L	J	1.0	0.50	ug/L			06/06/16 18:08	1
1,2-Dichloropropane	0.50 L	J	1.0	0.50	ug/L			06/06/16 18:08	1
1,3,5-Trimethylbenzene	0.56 L	j	1.0	0.56	ug/L			06/06/16 18:08	1
1,3-Dichlorobenzene	0.54 L	J	1.0	0.54	ug/L			06/06/16 18:08	1
1,3-Dichloropropane	0.50 L	J	1.0	0.50	ug/L			06/06/16 18:08	1
1,4-Dichlorobenzene	0.64 L	j · · · · · · · · · · · · · · ·	1.0	0.64	ug/L			06/06/16 18:08	1
2,2-Dichloropropane	0.50 L	J	1.0	0.50	ug/L			06/06/16 18:08	1
2-Chlorotoluene	0.57 L	J	1.0	0.57	ug/L			06/06/16 18:08	1
2-Hexanone	3.1 L	j · · · · · · · · · · · · · · · · · · ·	25	3.1	ug/L			06/06/16 18:08	1
4-Chlorotoluene	0.56 L	J	1.0	0.56	ug/L			06/06/16 18:08	1
Acetone	14 I		25	10	ug/L			06/06/16 18:08	1
Benzene	0.38 L	j	1.0	0.38	ug/L			06/06/16 18:08	1
Bromobenzene	0.54 L	J	1.0	0.54	ug/L			06/06/16 18:08	1
Bromochloromethane	0.52 L	J	1.0	0.52	ug/L			06/06/16 18:08	1
Bromodichloromethane	0.50 L	j	1.0	0.50	ug/L			06/06/16 18:08	1
Bromoform	0.71 L	J	5.0	0.71	ug/L			06/06/16 18:08	1
Bromomethane	0.98 L	J	1.0	0.98	ug/L			06/06/16 18:08	1
Carbon disulfide	0.50 L	j	1.0	0.50	ug/L			06/06/16 18:08	1
Carbon tetrachloride	0.50 L	J	1.0	0.50	-			06/06/16 18:08	1
Chlorobenzene	0.50 L	J	1.0	0.50	ug/L			06/06/16 18:08	1
Chloroethane	0.76 L	j	1.0	0.76	-			06/06/16 18:08	1
Chloroform	0.60 L	J	1.0		ug/L			06/06/16 18:08	1
Chloromethane	0.83 L	J	1.0		ug/L			06/06/16 18:08	1
cis-1,2-Dichloroethene	16		1.0		ug/L			06/06/16 18:08	1
cis-1,3-Dichloropropene	0.50 L	J	5.0		ug/L			06/06/16 18:08	1
Dibromochloromethane	0.50 L	J	1.0		ug/L			06/06/16 18:08	1
Dibromomethane	0.59 L	j · · · · · · · · · · · · · · · · · · ·	5.0		ug/L			06/06/16 18:08	1
Dichlorodifluoromethane	0.85 L		1.0		ug/L			06/06/16 18:08	1
Ethylbenzene	0.50 L		1.0		ug/L			06/06/16 18:08	1
Ethylene Dibromide	0.50 L		1.0		ug/L			06/06/16 18:08	1
Hexachlorobutadiene	0.90 L		5.0		ug/L			06/06/16 18:08	1
lodomethane	0.68 L		1.0		ug/L			06/06/16 18:08	1
Isopropyl ether	0.70 L		1.0		ug/L			06/06/16 18:08	· · · · · · · · · · · · · · · · · · ·
Isopropylbenzene	0.53 L		1.0		ug/L			06/06/16 18:08	1
Methyl Ethyl Ketone	2.6 L		25		ug/L			06/06/16 18:08	1

TestAmerica Pensacola

06/06/16 18:08

1.8 ug/L

1.8 U

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-42

Matrix: Water

Client Sample ID: FDTL-IW0008I-015.0-20160526	
Date Collected: 05/26/16 13:35	

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 18:08	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 18:08	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 18:08	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 18:08	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 18:08	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 18:08	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 18:08	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 18:08	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 18:08	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 18:08	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 18:08	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 18:08	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 18:08	1
trans-1,2-Dichloroethene	1.3		1.0	0.50	ug/L			06/06/16 18:08	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 18:08	1
Trichloroethene	0.82	1	1.0	0.50	ug/L			06/06/16 18:08	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 18:08	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 18:08	1
Vinyl chloride	15		1.0	0.50	ug/L			06/06/16 18:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		78 - 118			-		06/06/16 18:08	1
Dibromofluoromethane	106		81 - 121					06/06/16 18:08	1
Toluene-d8 (Surr)	92		80 - 120					06/06/16 18:08	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-43

Matrix: Water

Client Sample ID: FDTL-IW0009I-015.0-20160526 Date Collected: 05/26/16 13:05

Date Received: 05/28/16 09:48

nalyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	0.52	U –	1.0	0.52	ug/L			06/06/16 18:34	
,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 18:34	
,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 18:34	
,1,2-Trichloroethane	0.50	Ü	5.0	0.50	ug/L			06/06/16 18:34	
,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 18:34	
,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 18:34	
,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 18:34	
,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 18:34	
,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 18:34	
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 18:34	
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 18:34	
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 18:34	
,2-Dichlorobenzene	0.50		1.0		ug/L			06/06/16 18:34	
,2-Dichloroethane	0.50	U	1.0	0.50	-			06/06/16 18:34	
,2-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 18:34	
,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/06/16 18:34	
,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/06/16 18:34	
,3-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 18:34	
,4-Dichlorobenzene	0.64		1.0		ug/L			06/06/16 18:34	
,2-Dichloropropane	0.50		1.0	0.50	-			06/06/16 18:34	
-Chlorotoluene	0.57		1.0	0.57	-			06/06/16 18:34	
-Hexanone	3.1		25		ug/L			06/06/16 18:34	
-Chlorotoluene	0.56		1.0	0.56	-			06/06/16 18:34	
acetone	13		25		ug/L			06/06/16 18:34	
enzene	0.38		1.0	0.38	-			06/06/16 18:34	
romobenzene	0.54		1.0	0.54	-			06/06/16 18:34	
romochloromethane	0.52		1.0	0.52	-			06/06/16 18:34	
romodichloromethane	0.50		1.0		ug/L			06/06/16 18:34	
romotorm	0.30		5.0		ug/L			06/06/16 18:34	
romomethane	0.71		1.0	0.98				06/06/16 18:34	
carbon disulfide	0.50		1.0	0.50	•			06/06/16 18:34	
Carbon tetrachloride	0.50		1.0	0.50				06/06/16 18:34	
Chlorobenzene	0.50		1.0					06/06/16 18:34	
Chloroethane	0.50		1.0	0.50	ug/L ug/L			06/06/16 18:34	
Chloroform	0.60		1.0	0.60	-			06/06/16 18:34	
Chloromethane					Ü				
	0.83		1.0		ug/L			06/06/16 18:34	
is-1,2-Dichloroethene	15		1.0		ug/L			06/06/16 18:34	
is-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 18:34	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 18:34	
Dibromomethane	0.59		5.0		ug/L			06/06/16 18:34	
ichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 18:34	
thylbenzene	0.50		1.0		ug/L			06/06/16 18:34	
thylene Dibromide	0.50		1.0		ug/L			06/06/16 18:34	
lexachlorobutadiene	0.90		5.0		ug/L			06/06/16 18:34	
odomethane	0.68		1.0		ug/L			06/06/16 18:34	
sopropyl ether	0.70		1.0		ug/L			06/06/16 18:34	
	0.52	11	1.0	0.53	ug/L			06/06/16 18:34	
sopropylbenzene Methyl Ethyl Ketone	0.53 2.6		25		ug/L			06/06/16 18:34	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-43

Lab Sample ID. 400-122302-43

Matrix: Water

Date Collected: 05/26/16 13:05	
Date Received: 05/28/16 09:48	

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: FDTL-IW0009I-015.0-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 18:34	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 18:34	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 18:34	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 18:34	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 18:34	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 18:34	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 18:34	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 18:34	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 18:34	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 18:34	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 18:34	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 18:34	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 18:34	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 18:34	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 18:34	1
Trichloroethene	5.0		1.0	0.50	ug/L			06/06/16 18:34	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 18:34	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 18:34	1
Vinyl chloride	1.5		1.0	0.50	ug/L			06/06/16 18:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

vinyi chioride	1.5	1.0	0.50 ug/L		00/00/10 10.34	ı
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93	78 - 118			06/06/16 18:34	1
Dibromofluoromethane	109	81 - 121			06/06/16 18:34	1
Toluene-d8 (Surr)	94	80 - 120			06/06/16 18:34	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 14:05

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-44

Matrix: Water

	nic Compo	unds (GC/N	IS)
Analyte	Result	Qualifier	
1 1 1 2 Totrophlaropthons	0.52	11	

Client Sample ID: FDTL-IW0013I-015.0-20160526

Method: 8260B - Volatile Org Analyte	Result	Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 19:00	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	•
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 19:00	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	•
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	•
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 19:00	•
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 19:00	•
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 19:00	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 19:00	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 19:00	
1,2-Dichlorobenzene	0.50	U	1.0	0.50				06/06/16 19:00	•
1,2-Dichloroethane	0.50	U	1.0	0.50				06/06/16 19:00	
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 19:00	
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/06/16 19:00	
1,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/06/16 19:00	
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	
1,4-Dichlorobenzene	0.64	U	1.0	0.64				06/06/16 19:00	
2,2-Dichloropropane	0.50	U	1.0	0.50				06/06/16 19:00	
2-Chlorotoluene	0.57	U	1.0	0.57	-			06/06/16 19:00	
2-Hexanone	3.1	U	25		ug/L			06/06/16 19:00	,
4-Chlorotoluene	0.56	U	1.0	0.56				06/06/16 19:00	
Acetone	10		25		ug/L			06/06/16 19:00	
Benzene	0.38		1.0	0.38	-			06/06/16 19:00	,
Bromobenzene	0.54		1.0	0.54				06/06/16 19:00	
Bromochloromethane	0.52		1.0	0.52	-			06/06/16 19:00	
Bromodichloromethane	0.50		1.0	0.50	-			06/06/16 19:00	· · · · · .
Bromoform	0.71		5.0		ug/L			06/06/16 19:00	
Bromomethane	0.98		1.0	0.98	-			06/06/16 19:00	
Carbon disulfide	0.50		1.0	0.50	-			06/06/16 19:00	
Carbon tetrachloride	0.50		1.0	0.50	-			06/06/16 19:00	
Chlorobenzene	0.50		1.0	0.50	-			06/06/16 19:00	
Chloroethane	0.76		1.0	0.76				06/06/16 19:00	
Chloroform	0.60		1.0	0.60				06/06/16 19:00	
Chloromethane	0.83		1.0	0.83	-			06/06/16 19:00	
cis-1,2-Dichloroethene	23		1.0	0.50				06/06/16 19:00	,
cis-1,3-Dichloropropene	0.50	U	5.0		ug/L			06/06/16 19:00	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 19:00	
Dibromomethane	0.59		5.0		ug/L			06/06/16 19:00	· · · · · .
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 19:00	
Ethylbenzene	0.50		1.0	0.50	-			06/06/16 19:00	
Ethylene Dibromide	0.50		1.0		ug/L			06/06/16 19:00	,
Hexachlorobutadiene	0.90		5.0	0.90				06/06/16 19:00	
lodomethane	0.90		1.0	0.90	-			06/06/16 19:00	
Isopropyl ether	0.70		1.0	0.70				06/06/16 19:00	· · · · · .
Isopropylbenzene	0.70		1.0	0.70				06/06/16 19:00	
Methyl Ethyl Ketone	2.6		25		ug/L ug/L			06/06/16 19:00	
methyl isobutyl ketone	1.8		25 25		ug/L ug/L			06/06/16 19:00	· · · · · .

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-44

Lab Sample ID. 400-122302-44

Matrix: Water

Date Collected: 05/26/16 14:05 Date Received: 05/28/16 09:48

Client Sample ID: FDTL-IW0013I-015.0-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 19:00	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 19:00	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 19:00	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 19:00	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 19:00	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 19:00	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 19:00	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 19:00	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 19:00	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 19:00	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 19:00	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 19:00	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 19:00	1
trans-1,2-Dichloroethene	4.4		1.0	0.50	ug/L			06/06/16 19:00	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 19:00	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 19:00	1
Vinyl acetate	2.0	Ü	25	2.0	ug/L			06/06/16 19:00	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 19:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			•		06/06/16 19:00	1
Dibromofluoromethane	108		81 - 121					06/06/16 19:00	1

80 - 120

92

06/06/16 19:00

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-45

Matrix: Water

Client Sample ID: FDTL-IW0014I-015.0-20160526

Date Collected: 05/26/16 14:00 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 19:26	
,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	
,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	
,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 19:26	
,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	
,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	
,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	
,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 19:26	
,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 19:26	
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 19:26	
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 19:26	
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 19:26	
,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	
,2-Dichloroethane	0.50	U	1.0	0.50	•			06/06/16 19:26	
,2-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 19:26	
,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/06/16 19:26	
,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/06/16 19:26	
,3-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 19:26	
,4-Dichlorobenzene	0.64	U	1.0	0.64	-			06/06/16 19:26	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/06/16 19:26	
2-Chlorotoluene	0.57		1.0	0.57	-			06/06/16 19:26	
2-Hexanone	3.1		25		ug/L			06/06/16 19:26	
-Chlorotoluene	0.56		1.0	0.56				06/06/16 19:26	
Acetone	10		25		ug/L			06/06/16 19:26	
Benzene	0.38		1.0	0.38	.			06/06/16 19:26	
Bromobenzene	0.54		1.0	0.54				06/06/16 19:26	
Bromochloromethane	0.52		1.0	0.52	-			06/06/16 19:26	
Bromodichloromethane	0.50		1.0	0.50	-			06/06/16 19:26	
Bromoform	0.30		5.0	0.30	ug/L ug/L			06/06/16 19:26	
Bromomethane	0.71		1.0	0.71	•			06/06/16 19:26	
Carbon disulfide	0.50			0.50	-			06/06/16 19:26	
	0.50		1.0 1.0		-				
Carbon tetrachloride				0.50	_			06/06/16 19:26	
Chlorobenzene	0.50		1.0	0.50	•			06/06/16 19:26	
Chloroethane	0.76		1.0	0.76	-			06/06/16 19:26	
Chloroform	0.60		1.0	0.60	-			06/06/16 19:26	
Chloromethane	0.83		1.0	0.83				06/06/16 19:26	
is-1,2-Dichloroethene	0.50		1.0	0.50				06/06/16 19:26	
is-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 19:26	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 19:26	
Dibromomethane	0.59		5.0	0.59				06/06/16 19:26	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 19:26	
Ethylbenzene	0.50		1.0		ug/L			06/06/16 19:26	
Ethylene Dibromide	0.50		1.0	0.50				06/06/16 19:26	
lexachlorobutadiene	0.90		5.0		ug/L			06/06/16 19:26	
odomethane	0.68		1.0		ug/L			06/06/16 19:26	
sopropyl ether	0.70		1.0	0.70				06/06/16 19:26	
sopropylbenzene	0.53		1.0	0.53	-			06/06/16 19:26	
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/06/16 19:26	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-45

Matrix: Water

16 09:48	: 05/28/16 09:48	Received:	Date

Client Sample ID: FDTL-IW0014I-015.0-20160526

Date Collected: 05/26/16 14:00

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	\overline{U}	1.0	0.74	ug/L			06/06/16 19:26	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 19:26	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 19:26	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 19:26	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 19:26	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 19:26	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 19:26	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 19:26	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 19:26	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 19:26	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 19:26	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 19:26	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 19:26	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 19:26	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 19:26	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 19:26	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 19:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		78 - 118			-		06/06/16 19:26	1
Dibromofluoromethane	106		81 - 121					06/06/16 19:26	1
Toluene-d8 (Surr)	93		80 - 120					06/06/16 19:26	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 13:20

Date Received: 05/28/16 09:48

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-46

ab Sample ID. 400-122302-40

Matrix: Water

	 	_	 	(00/110)
_				

Client Sample ID: FDTL-IW0015S-010.0-20160526

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 10:36	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 10:36	1
1,1-Dichloroethane	0.58	I	1.0	0.50	ug/L			06/06/16 10:36	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 10:36	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 10:36	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 10:36	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 10:36	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 10:36	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,3,5-Trimethylbenzene	0.56	Ü	1.0	0.56	ug/L			06/06/16 10:36	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/06/16 10:36	1
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
1,4-Dichlorobenzene	0.64	U	1.0	0.64	ug/L			06/06/16 10:36	1
2,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
2-Chlorotoluene	0.57	U	1.0	0.57	ug/L			06/06/16 10:36	1
2-Hexanone	3.1		25	3.1	ug/L			06/06/16 10:36	1
4-Chlorotoluene	0.56	U	1.0	0.56	ug/L			06/06/16 10:36	1
Acetone	10	U	25		ug/L			06/06/16 10:36	1
Benzene	0.38		1.0	0.38	ug/L			06/06/16 10:36	1
Bromobenzene	0.54	U	1.0	0.54	ug/L			06/06/16 10:36	1
Bromochloromethane	0.52	U	1.0		ug/L			06/06/16 10:36	1
Bromodichloromethane	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
Bromoform	0.71	U	5.0		ug/L			06/06/16 10:36	1
Bromomethane	0.98	U	1.0	0.98	ug/L			06/06/16 10:36	1
Carbon disulfide	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
Chloroethane	0.76		1.0		ug/L			06/06/16 10:36	1
Chloroform	0.60	U	1.0	0.60	-			06/06/16 10:36	1
Chloromethane	0.83	U	1.0	0.83	ug/L			06/06/16 10:36	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/06/16 10:36	1
cis-1,3-Dichloropropene	0.50	U	5.0		ug/L			06/06/16 10:36	1
Dibromochloromethane	0.50	U	1.0		ug/L			06/06/16 10:36	1
Dibromomethane	0.59		5.0		ug/L			06/06/16 10:36	1
Dichlorodifluoromethane	0.85	U	1.0		ug/L			06/06/16 10:36	1
Ethylbenzene	0.50		1.0		ug/L			06/06/16 10:36	1
Ethylene Dibromide	0.50		1.0		ug/L			06/06/16 10:36	1
Hexachlorobutadiene	0.90		5.0		ug/L			06/06/16 10:36	1
Iodomethane	0.68		1.0		ug/L			06/06/16 10:36	1
Isopropyl ether	0.70		1.0		ug/L			06/06/16 10:36	1
Isopropylbenzene	0.53		1.0		ug/L			06/06/16 10:36	1
Methyl Ethyl Ketone	2.6		25		ug/L			06/06/16 10:36	1
methyl isobutyl ketone	1.8		25		ug/L			06/06/16 10:36	· · · · · · · · · · · · · · · · · · ·

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-46

Lab Sample ID. 400-122302-40

Matrix: Water

Client Sample ID: FDTL-IW0015S-010.0-20160526
Date Collected: 05/26/16 13:20

Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 10:36	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 10:36	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 10:36	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 10:36	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 10:36	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 10:36	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 10:36	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 10:36	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 10:36	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 10:36	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 10:36	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 10:36	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 10:36	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 10:36	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 10:36	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 10:36	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 10:36	1
Vinyl chloride	15		1.0	0.50	ug/L			06/06/16 10:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118			-		06/06/16 10:36	1
Dibromofluoromethane	97		81 - 121					06/06/16 10:36	1
Toluene-d8 (Surr)	101		80 - 120					06/06/16 10:36	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 14:15

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-47

Matrix: Water

Date Received: 05/28/16 09:48	

Client Sample ID: FDTL-IW0017I-015.0-20160526

Method: 8260B - Volatile Orga Analyte	Result	Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 11:02	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 11:02	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 11:02	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 11:02	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 11:02	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 11:02	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 11:02	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 11:02	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 11:02	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 11:02	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 11:02	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 11:02	1
1,2-Dichlorobenzene	0.50	U	1.0		ug/L			06/06/16 11:02	1
1,2-Dichloroethane	0.50	U	1.0		ug/L			06/06/16 11:02	1
1,2-Dichloropropane	0.50	U	1.0		ug/L			06/06/16 11:02	1
1,3,5-Trimethylbenzene	0.56	U	1.0		ug/L			06/06/16 11:02	1
1,3-Dichlorobenzene	0.54		1.0		ug/L			06/06/16 11:02	1
1,3-Dichloropropane	0.50	U	1.0		ug/L			06/06/16 11:02	1
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/06/16 11:02	1
2,2-Dichloropropane	0.50		1.0		ug/L			06/06/16 11:02	1
2-Chlorotoluene	0.57		1.0		ug/L			06/06/16 11:02	1
2-Hexanone	3.1		25		ug/L			06/06/16 11:02	1
4-Chlorotoluene	0.56		1.0		ug/L			06/06/16 11:02	1
Acetone	10		25		ug/L			06/06/16 11:02	1
Benzene	0.38		1.0		ug/L			06/06/16 11:02	1
Bromobenzene	0.54		1.0		ug/L			06/06/16 11:02	1
Bromochloromethane	0.52		1.0		ug/L			06/06/16 11:02	1
Bromodichloromethane	0.50		1.0		ug/L			06/06/16 11:02	1
Bromoform	0.71		5.0	0.71	-			06/06/16 11:02	1
Bromomethane	0.98		1.0	0.98	-			06/06/16 11:02	1
Carbon disulfide	0.50		1.0	0.50	-			06/06/16 11:02	1
Carbon tetrachloride	0.50		1.0	0.50	-			06/06/16 11:02	1
Chlorobenzene	0.50		1.0	0.50	-			06/06/16 11:02	. 1
Chloroethane	0.76		1.0	0.76	-			06/06/16 11:02	
Chloroform	0.60		1.0	0.60				06/06/16 11:02	1
Chloromethane	0.83		1.0	0.83	-			06/06/16 11:02	1
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/06/16 11:02	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 11:02	1
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 11:02	1
Dibromomethane	0.59		5.0		ug/L			06/06/16 11:02	<mark>1</mark>
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 11:02	1
	0.50				-			06/06/16 11:02	
Ethylbenzene Ethylene Dibromide	0.50		1.0		ug/L ug/L			06/06/16 11:02	1 1
Hexachlorobutadiene	0.90		1.0 5.0		-			06/06/16 11:02	
lodomethane					ug/L			06/06/16 11:02	1
	0.68		1.0		ug/L				1
Isopropyl ether	0.70		1.0		ug/L			06/06/16 11:02	1
Isopropylbenzene Methyl Ethyl Ketone	0.53 2.6		1.0 25		ug/L ug/L			06/06/16 11:02 06/06/16 11:02	1

Client: Geosyntec Consultants, Inc.

Date Collected: 05/26/16 14:15

Date Received: 05/28/16 09:48

Client Sample ID: FDTL-IW0017I-015.0-20160526

Project/Site: VAB-LTM

4-Bromofluorobenzene

Dibromofluoromethane

Toluene-d8 (Surr)

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-47

ab Sample ID. 400-122302-47

06/06/16 11:02

06/06/16 11:02

06/06/16 11:02

1

Matrix: Water

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 11:02	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 11:02	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 11:02	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 11:02	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 11:02	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 11:02	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 11:02	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 11:02	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 11:02	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 11:02	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 11:02	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 11:02	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 11:02	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 11:02	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 11:02	1
Trichloroethene	4.2		1.0	0.50	ug/L			06/06/16 11:02	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 11:02	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 11:02	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 11:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

78 - 118

81 - 121

80 - 120

96

97

101

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-48

Matrix: Water

Client Sample ID: FDTL-IW0019I-015.0-20160526

Date Collected: 05/26/16 13:30 Date Received: 05/28/16 09:48

Analyte	anic Compo Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 11:26	
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 11:26	•
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 11:26	•
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 11:26	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 11:26	
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 11:26	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 11:26	· · · · · · · · ·
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 11:26	
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 11:26	
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 11:26	
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 11:26	
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 11:26	
1,2-Dichlorobenzene	0.50		1.0	0.50	ug/L			06/06/16 11:26	
1,2-Dichloroethane	0.50	U	1.0		ug/L			06/06/16 11:26	
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 11:26	
1,3,5-Trimethylbenzene	0.56		1.0		ug/L			06/06/16 11:26	
1,3-Dichlorobenzene	0.54	U	1.0		ug/L			06/06/16 11:26	
1,3-Dichloropropane	0.50	U	1.0		ug/L			06/06/16 11:26	
1,4-Dichlorobenzene	0.64		1.0		ug/L			06/06/16 11:26	
2,2-Dichloropropane	0.50		1.0		ug/L			06/06/16 11:26	
2-Chlorotoluene	0.57	U	1.0	0.57	-			06/06/16 11:26	
2-Hexanone	3.1		25		ug/L			06/06/16 11:26	
1-Chlorotoluene	0.56	U	1.0	0.56	-			06/06/16 11:26	
Acetone	10		25		ug/L			06/06/16 11:26	
Benzene	0.38		1.0	0.38	-			06/06/16 11:26	
Bromobenzene	0.54	U	1.0	0.54	-			06/06/16 11:26	
Bromochloromethane	0.52	U	1.0	0.52	-			06/06/16 11:26	
Bromodichloromethane	0.50		1.0	0.50				06/06/16 11:26	
Bromoform	0.71	U	5.0	0.71	-			06/06/16 11:26	
Bromomethane	0.98	U	1.0	0.98	_			06/06/16 11:26	
Carbon disulfide	0.50		1.0	0.50				06/06/16 11:26	
Carbon tetrachloride	0.50		1.0	0.50	•			06/06/16 11:26	
Chlorobenzene	0.50		1.0	0.50				06/06/16 11:26	
Chloroethane	0.76		1.0	0.76	-			06/06/16 11:26	
Chloroform	0.60		1.0	0.60				06/06/16 11:26	
Chloromethane	0.83		1.0		ug/L			06/06/16 11:26	
cis-1,2-Dichloroethene	0.50		1.0		ug/L			06/06/16 11:26	
cis-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 11:26	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 11:26	
Dibromomethane	0.59		5.0		ug/L			06/06/16 11:26	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 11:26	
Ethylbenzene	0.50		1.0		ug/L			06/06/16 11:26	
Ethylene Dibromide	0.50		1.0		ug/L			06/06/16 11:26	
Hexachlorobutadiene	0.90		5.0		ug/L			06/06/16 11:26	
odomethane	0.68		1.0		ug/L			06/06/16 11:26	
sopropyl ether	0.70		1.0		ug/L			06/06/16 11:26	
sopropylbenzene	0.70		1.0		ug/L ug/L			06/06/16 11:26	
Methyl Ethyl Ketone	2.6		25		ug/L ug/L			06/06/16 11:26	
methyl isobutyl ketone	1.8		25 25		ug/L ug/L			06/06/16 11:26	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-48

Lab Sample ID. 400-122302-40

Matrix: Water

Client Sample ID: FDTL-IW0019I-015.0-20160526

Date Collected: 05/26/16 13:30 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 11:26	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 11:26	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 11:26	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 11:26	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 11:26	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 11:26	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 11:26	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 11:26	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 11:26	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 11:26	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 11:26	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 11:26	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 11:26	1
trans-1,2-Dichloroethene	1.0		1.0	0.50	ug/L			06/06/16 11:26	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 11:26	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 11:26	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 11:26	1
Vinyl acetate	2.0	Ü	25	2.0	ug/L			06/06/16 11:26	1
Vinyl chloride	62		1.0	0.50	ug/L			06/06/16 11:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118			-		06/06/16 11:26	1
Dibromofluoromethane	97		81 - 121					06/06/16 11:26	1
Toluene-d8 (Surr)	102		80 - 120					06/06/16 11:26	1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-49

Matrix: Water

Client Sample ID: TRIP BLANK

Date Collected: 05/28/16 00:00 Date Received: 05/28/16 09:48

Analyte	Result	unds (GC/M Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 10:12	
,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	
,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	
,1,2-Trichloroethane	0.50	Ü	5.0	0.50	ug/L			06/06/16 10:12	
,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	
,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	
,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	
,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 10:12	
,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 10:12	
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 10:12	
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 10:12	
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 10:12	
,2-Dichlorobenzene	0.50		1.0		ug/L			06/06/16 10:12	
,2-Dichloroethane	0.50	U	1.0	0.50	-			06/06/16 10:12	
,2-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 10:12	
,3,5-Trimethylbenzene	0.56		1.0	0.56	-			06/06/16 10:12	
,3-Dichlorobenzene	0.54	U	1.0	0.54	-			06/06/16 10:12	
,3-Dichloropropane	0.50	U	1.0	0.50	-			06/06/16 10:12	
,4-Dichlorobenzene	0.64		1.0	0.64	-			06/06/16 10:12	
2,2-Dichloropropane	0.50		1.0	0.50	-			06/06/16 10:12	
2-Chlorotoluene	0.57		1.0	0.57	-			06/06/16 10:12	
2-Hexanone	3.1		25		ug/L			06/06/16 10:12	
I-Chlorotoluene	0.56		1.0	0.56	-			06/06/16 10:12	
Acetone	10		25		ug/L			06/06/16 10:12	
Benzene	0.38		1.0	0.38	-			06/06/16 10:12	
Bromobenzene	0.54		1.0	0.54	-			06/06/16 10:12	
Bromochloromethane	0.52		1.0	0.52	-			06/06/16 10:12	
Bromodichloromethane	0.50		1.0		ug/L			06/06/16 10:12	
Bromoform	0.71		5.0		ug/L			06/06/16 10:12	
Bromomethane	0.98		1.0	0.98				06/06/16 10:12	
Carbon disulfide	0.50		1.0	0.50				06/06/16 10:12	
Carbon tetrachloride	0.50		1.0	0.50	-			06/06/16 10:12	
Chlorobenzene	0.50		1.0	0.50				06/06/16 10:12	
Chloroethane	0.76		1.0		ug/L			06/06/16 10:12	
Chloroform	0.60		1.0	0.60	-			06/06/16 10:12	
Chloromethane	0.83		1.0		ug/L			06/06/16 10:12	
sis-1,2-Dichloroethene	0.50		1.0		ug/L			06/06/16 10:12	
sis-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 10:12	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 10:12	
Dibromomethane	0.59		5.0		ug/L			06/06/16 10:12	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 10:12	
Ethylbenzene	0.50		1.0		ug/L ug/L			06/06/16 10:12	
Ethylene Dibromide	0.50		1.0		ug/L ug/L			06/06/16 10:12	
Hexachlorobutadiene	0.50		5.0		ug/L ug/L			06/06/16 10:12	
odomethane	0.90		5.0 1.0		ug/L ug/L			06/06/16 10:12	
	0.70							06/06/16 10:12	
sopropyl ether			1.0		ug/L				
sopropylbenzene	0.53		1.0		ug/L			06/06/16 10:12	
Methyl Ethyl Ketone	2.6	U	25	2.6	ug/L			06/06/16 10:12	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-49

Matrix: Water

Client Sample ID: TRIP BLANK

Date Collected: 05/28/16 00:00 Date Received: 05/28/16 09:48

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/06/16 10:12	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 10:12	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 10:12	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 10:12	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 10:12	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 10:12	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 10:12	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 10:12	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 10:12	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 10:12	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 10:12	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 10:12	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 10:12	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 10:12	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 10:12	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 10:12	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 10:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		78 - 118			-		06/06/16 10:12	1
Dibromofluoromethane	97		81 - 121					06/06/16 10:12	1
Toluene-d8 (Surr)	100		80 - 120					06/06/16 10:12	1

Client: Geosyntec Consultants, Inc.

Lab Sample ID: MB 400-308608/4

Method: 8260B - Volatile Organic Compounds (GC/MS)

Project/Site: VAB-LTM

Matrix: Water

Methyl Ethyl Ketone

TestAmerica Job ID: 400-122302-1

Client Sample ID: Method Blank

Prep Type: Total/NA

Analysis Batch: 308608	MB	MB							
Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/04/16 10:25	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/04/16 10:25	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/04/16 10:25	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/04/16 10:25	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/04/16 10:25	1
1,2,4-Trimethylbenzene	0.82	U	1.0		ug/L			06/04/16 10:25	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/04/16 10:25	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	ug/L			06/04/16 10:25	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 10:25	1
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
1,4-Dichlorobenzene	0.64	U	1.0	0.64	ug/L			06/04/16 10:25	1
2,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
2-Chlorotoluene	0.57	U	1.0	0.57	ug/L			06/04/16 10:25	1
2-Hexanone	3.1	U	25	3.1	ug/L			06/04/16 10:25	1
4-Chlorotoluene	0.56	U	1.0	0.56	ug/L			06/04/16 10:25	1
Acetone	10	U	25	10	ug/L			06/04/16 10:25	1
Benzene	0.38	U	1.0	0.38	ug/L			06/04/16 10:25	1
Bromobenzene	0.54	U	1.0	0.54	ug/L			06/04/16 10:25	1
Bromochloromethane	0.52	U	1.0	0.52	ug/L			06/04/16 10:25	1
Bromodichloromethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Bromoform	0.71	U	5.0	0.71	ug/L			06/04/16 10:25	1
Bromomethane	0.98	U	1.0	0.98	ug/L			06/04/16 10:25	1
Carbon disulfide	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Chloroethane	0.76	U	1.0	0.76	ug/L			06/04/16 10:25	1
Chloroform	0.60	U	1.0	0.60	ug/L			06/04/16 10:25	1
Chloromethane	0.83	U	1.0	0.83	ug/L			06/04/16 10:25	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
cis-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 10:25	1
Dibromochloromethane	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Dibromomethane	0.59	U	5.0	0.59	ug/L			06/04/16 10:25	1
Dichlorodifluoromethane	0.85	U	1.0	0.85	ug/L			06/04/16 10:25	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Ethylene Dibromide	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Hexachlorobutadiene	0.90	U	5.0	0.90	ug/L			06/04/16 10:25	1
Iodomethane	0.68	U	1.0	0.68	ug/L			06/04/16 10:25	1
Isopropyl ether	0.70	U	1.0	0.70	ug/L			06/04/16 10:25	1
Isopropylbenzene	0.53	U	1.0	0.53	ug/L			06/04/16 10:25	1
Mathed Ethed Katana	0.0		0.5	0.0				00/04/40 40 05	

TestAmerica Pensacola

06/04/16 10:25

25

2.6 ug/L

2.6 U

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-308608/4

Matrix: Water

Analysis Batch: 308608

Client Sample ID: Method Blank

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
methyl isobutyl ketone	1.8	U	25	1.8	ug/L			06/04/16 10:25	1
Methyl tert-butyl ether	0.74	U	1.0	0.74	ug/L			06/04/16 10:25	1
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/04/16 10:25	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/04/16 10:25	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/04/16 10:25	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/04/16 10:25	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/04/16 10:25	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/04/16 10:25	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/04/16 10:25	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/04/16 10:25	1
Styrene	1.0	U	1.0	1.0	ug/L			06/04/16 10:25	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/04/16 10:25	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/04/16 10:25	1
Toluene	0.70	U	1.0	0.70	ug/L			06/04/16 10:25	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/04/16 10:25	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/04/16 10:25	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/04/16 10:25	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/04/16 10:25	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 4-Bromofluorobenzene 95 78 - 118 06/04/16 10:25 Dibromofluoromethane 95 81 - 121 06/04/16 10:25 1 Toluene-d8 (Surr) 103 80 - 120 06/04/16 10:25

Lab Sample ID: LCS 400-308608/1002

Matrix: Water

Analysis Batch: 308608

Client Sample ID: Lab Control Sample Prep Type: Total/NA

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	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	50.0	52.7		ug/L		105	67 - 131	
1,1,1-Trichloroethane	50.0	46.6		ug/L		93	68 - 130	
1,1,2,2-Tetrachloroethane	50.0	55.7		ug/L		111	70 - 131	
1,1,2-Trichloroethane	50.0	55.5		ug/L		111	70 - 130	
1,1-Dichloroethane	50.0	43.5		ug/L		87	70 - 130	
1,1-Dichloroethene	50.0	51.1		ug/L		102	63 - 134	
1,1-Dichloropropene	50.0	43.1		ug/L		86	70 - 130	
1,2,3-Trichlorobenzene	50.0	49.5		ug/L		99	60 - 138	
1,2,3-Trichloropropane	50.0	54.1		ug/L		108	70 - 130	
1,2,4-Trichlorobenzene	50.0	51.5		ug/L		103	60 - 140	
1,2,4-Trimethylbenzene	50.0	51.9		ug/L		104	70 - 130	
1,2-Dibromo-3-Chloropropane	50.0	50.1		ug/L		100	54 - 135	
1,2-Dichlorobenzene	50.0	51.3		ug/L		103	67 - 130	
1,2-Dichloroethane	50.0	43.4		ug/L		87	69 - 130	
1,2-Dichloropropane	50.0	43.0		ug/L		86	70 - 130	
1,3,5-Trimethylbenzene	50.0	53.9		ug/L		108	69 - 130	
1,3-Dichlorobenzene	50.0	52.2		ug/L		104	70 - 130	

Client: Geosyntec Consultants, Inc.

TestAmerica Job ID: 400-122302-1 Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-308608/1002

Matrix: Water

Client Sample	ID: Lab Control Sample
	Prep Type: Total/NA

Analysis Batch: 308608					Prep Type. Total
Analysis Batch. 300000	Spike	LCS	LCS		%Rec.
Analyte	Added	Result	Qualifier Unit	D %Rec	Limits
1,3-Dichloropropane	50.0	51.0	ug/L	102	70 - 130
1,4-Dichlorobenzene	50.0	52.9	ug/L	106	70 - 130
2,2-Dichloropropane	50.0	44.2	ug/L	88	52 - 135
2-Chlorotoluene	50.0	51.8	ug/L	104	70 - 130
2-Hexanone	200	203	ug/L	102	65 - 137
4-Chlorotoluene	50.0	51.6	ug/L	103	70 - 130
Acetone	200	191	ug/L	95	43 - 160
Benzene	50.0	46.8	ug/L	94	70 - 130
Bromobenzene	50.0	53.0	ug/L	106	70 - 132
Bromochloromethane	50.0	45.8	ug/L	92	70 - 130
Bromodichloromethane	50.0	46.9	ug/L	94	67 - 133
Bromoform	50.0	52.5	ug/L	105	57 ₋ 140
Bromomethane	50.0	39.8	ug/L	80	10 - 160
Carbon disulfide	50.0	46.3	ug/L	93	61 - 137
Carbon tetrachloride	50.0	45.8	ug/L	92	61 - 137
Chlorobenzene	50.0	53.5	ug/L	107	70 - 130
Chloroethane	50.0	47.1	ug/L	94	55 ₋ 141
Chloroform	50.0	44.9	ug/L	90	69 - 130
Chloromethane	50.0	42.9	ug/L	86	58 - 137
cis-1,2-Dichloroethene	50.0	44.3	ug/L	89	68 - 130
·					69 - 132
cis-1,3-Dichloropropene	50.0 50.0	45.7	ug/L	91	
Dibromochloromethane		55.6	ug/L	111	67 - 135
Dibromomethane	50.0	45.2	ug/L	90	70 - 130
Dichlorodifluoromethane	50.0	48.6	ug/L	97	41 - 146
Ethylbenzene	50.0	54.1	ug/L	108	70 - 130
Ethylene Dibromide	50.0	55.2	ug/L	110	70 - 130
Hexachlorobutadiene	50.0	47.4	ug/L	95	53 - 140
Iodomethane	50.0	45.1	ug/L	90	27 - 159
Isopropyl ether	50.0	46.3	ug/L	93	64 - 132
Isopropylbenzene	50.0	56.5	ug/L	113	70 - 130
Methyl Ethyl Ketone	200	191	ug/L	95	61 - 145
methyl isobutyl ketone	200	175	ug/L	88	69 - 138
Methyl tert-butyl ether	50.0	45.3	ug/L	91	66 - 130
Methylene Chloride	50.0	49.5	ug/L	99	66 - 135
m-Xylene & p-Xylene	50.0	53.8	ug/L	108	70 - 130
Naphthalene	50.0	51.9	ug/L	104	47 - 149
n-Butylbenzene	50.0	51.9	ug/L	104	67 - 130
N-Propylbenzene	50.0	51.7	ug/L	103	70 - 130
o-Xylene	50.0	55.5	ug/L	111	70 - 130
p-Cymene	50.0	49.2	ug/L	98	65 - 130
sec-Butylbenzene	50.0	53.1	ug/L	106	66 - 130
Styrene	50.0	53.8	ug/L	108	70 ₋ 130
tert-Butylbenzene	50.0	52.4	ug/L	105	64 - 139
Tetrachloroethene	50.0	53.8	ug/L	108	65 - 130
Toluene	50.0	53.2	ug/L	106	70 ₋ 130
trans-1,2-Dichloroethene	50.0	47.3	ug/L	95	70 - 130
trans-1,3-Dichloropropene	50.0	51.1	ug/L	102	63 - 130
Trichloroethene	50.0	46.8	ug/L	94	70 - 130

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Type: Total/NA

Lab Sample ID: LCS 400-308608/1002 **Matrix: Water**

Analysis Batch: 308608

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Trichlorofluoromethane	50.0	51.9		ug/L		104	65 - 138	
Vinyl acetate	100	94.2		ug/L		94	26 - 160	
Vinyl chloride	50.0	44.5		ug/L		89	59 - 136	

LCS LCS Limits Surrogate %Recovery Qualifier 4-Bromofluorobenzene 99 78 - 118 Dibromofluoromethane 94 81 - 121 Toluene-d8 (Surr) 110 80 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122302-1 MS Client Sample ID: C5ES-MW0010I-022.5-20160527

Matrix: Water

Analysis Batch: 308608									71	
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	0.52	U	50.0	53.7		ug/L		107	59 - 137	
1,1,1-Trichloroethane	0.50	U	50.0	49.4		ug/L		99	57 - 142	
1,1,2,2-Tetrachloroethane	0.50	U	50.0	60.2		ug/L		120	66 - 135	
1,1,2-Trichloroethane	0.50	U	50.0	55.4		ug/L		111	66 - 131	
1,1-Dichloroethane	0.50	U	50.0	46.0		ug/L		92	61 - 144	
1,1-Dichloroethene	0.50	U	50.0	53.9		ug/L		108	54 - 147	
1,1-Dichloropropene	0.50	U	50.0	45.6		ug/L		91	65 - 136	
1,2,3-Trichlorobenzene	0.70	U	50.0	56.1		ug/L		112	43 - 145	
1,2,3-Trichloropropane	0.84	U	50.0	57.2		ug/L		114	65 - 133	
1,2,4-Trichlorobenzene	0.82	U	50.0	58.0		ug/L		116	39 - 148	
1,2,4-Trimethylbenzene	0.82	U	50.0	59.2		ug/L		118	50 - 139	
1,2-Dibromo-3-Chloropropane	1.5	U	50.0	49.8		ug/L		100	45 - 135	
1,2-Dichlorobenzene	0.50	U	50.0	58.1		ug/L		116	52 - 137	
1,2-Dichloroethane	0.50	U	50.0	45.1		ug/L		90	60 - 141	
1,2-Dichloropropane	0.50	U	50.0	44.9		ug/L		90	66 - 137	
1,3,5-Trimethylbenzene	0.56	U	50.0	62.5		ug/L		125	52 - 135	
1,3-Dichlorobenzene	0.54	U	50.0	59.9		ug/L		120	54 - 135	
1,3-Dichloropropane	0.50	U	50.0	50.8		ug/L		102	66 - 133	
1,4-Dichlorobenzene	0.64	U	50.0	60.7		ug/L		121	53 - 135	
2,2-Dichloropropane	0.50	U	50.0	46.8		ug/L		94	42 - 144	
2-Chlorotoluene	0.57	U	50.0	60.8		ug/L		122	53 - 134	
2-Hexanone	3.1	U	200	183		ug/L		92	65 - 140	
4-Chlorotoluene	0.56	U	50.0	59.7		ug/L		119	54 - 133	
Acetone	11	I	200	163		ug/L		76	43 - 160	
Benzene	0.38	Ü	50.0	49.6		ug/L		99	56 - 142	
Bromobenzene	0.54	U	50.0	59.8		ug/L		120	59 - 136	
Bromochloromethane	0.52	U	50.0	48.5		ug/L		97	64 - 140	
Bromodichloromethane	0.50	U	50.0	48.8		ug/L		98	59 - 143	
Bromoform	0.71	U	50.0	50.5		ug/L		101	50 - 140	
Bromomethane	0.98	U	50.0	26.7		ug/L		53	10 - 160	
Carbon disulfide	1.3		50.0	50.8		ug/L		99	48 - 152	
Carbon tetrachloride	0.50	U	50.0	47.7		ug/L		95	55 ₋ 145	
Chlorobenzene	0.50	U	50.0	55.7		ug/L		111	64 - 130	
Chloroethane	0.76	U	50.0	49.0		ug/L		98	50 - 151	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122302-1 MS

Matrix: Water

Analysis Batch: 308608

Client Sample ID: C5ES-MW0010I-022.5-20160527

Prep Type: Total/NA

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloroform	0.60	U	50.0	47.4		ug/L		95	60 - 141	
Chloromethane	0.83	U	50.0	38.3		ug/L		77	49 - 148	
cis-1,2-Dichloroethene	0.50	U	50.0	47.2		ug/L		94	59 - 143	
cis-1,3-Dichloropropene	0.50	U	50.0	47.4		ug/L		95	57 - 140	
Dibromochloromethane	0.50	U	50.0	56.2		ug/L		112	56 - 143	
Dibromomethane	0.59	U	50.0	47.1		ug/L		94	63 - 138	
Dichlorodifluoromethane	0.85	U	50.0	46.2		ug/L		92	16 - 160	
Ethylbenzene	0.50	U	50.0	56.0		ug/L		112	58 ₋ 131	
Ethylene Dibromide	0.50	U	50.0	55.7		ug/L		111	64 - 132	
Hexachlorobutadiene	0.90	U	50.0	54.9		ug/L		110	31 - 149	
Iodomethane	0.68	U	50.0	58.9		ug/L		118	20 - 160	
Isopropyl ether	0.70	U	50.0	46.2		ug/L		92	60 - 144	
Isopropylbenzene	0.53	U	50.0	58.2		ug/L		116	56 - 133	
Methyl Ethyl Ketone	2.6	U	200	171		ug/L		85	55 - 150	
methyl isobutyl ketone	1.8	Ū	200	165		ug/L		83	63 - 146	
Methyl tert-butyl ether	0.74	U	50.0	45.7		ug/L		91	59 - 137	
Methylene Chloride	3.0	U	50.0	50.0		ug/L		100	60 - 146	
m-Xylene & p-Xylene	1.6	Ū	50.0	56.3		ug/L		113	57 - 130	
Naphthalene	1.0	U	50.0	56.2		ug/L		112	25 - 160	
n-Butylbenzene	0.76	U	50.0	59.5		ug/L		119	41 - 142	
N-Propylbenzene	0.69	U	50.0	59.5		ug/L		119	51 - 138	
o-Xylene	0.60	U	50.0	57.4		ug/L		115	61 - 130	
p-Cymene	0.71	U	50.0	57.1		ug/L		114	48 - 139	
sec-Butylbenzene	0.70	U	50.0	61.1		ug/L		122	50 - 138	
Styrene	1.0	U	50.0	55.9		ug/L		112	58 ₋ 131	
tert-Butylbenzene	0.63	U	50.0	60.0		ug/L		120	54 - 146	
Tetrachloroethene	0.58	U	50.0	54.6		ug/L		109	52 - 133	
Toluene	0.70	U	50.0	55.9		ug/L		112	65 - 130	
trans-1,2-Dichloroethene	0.50	U	50.0	50.6		ug/L		101	61 - 143	
trans-1,3-Dichloropropene	0.50	Ū	50.0	51.3		ug/L		103	53 - 133	
Trichloroethene	0.50	U	50.0	49.6		ug/L		99	64 - 136	
Trichlorofluoromethane	0.52	U	50.0	50.4		ug/L		101	54 ₋ 156	
Vinyl acetate	2.0	U	100	90.3		ug/L		90	26 - 160	
Vinyl chloride	0.50	U	50.0	39.1		ug/L		78	46 - 152	
	•••									

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	103		78 - 118
Dibromofluoromethane	95		81 - 121
Toluene-d8 (Surr)	108		80 - 120

Lab Sample ID: 400-122302-1 MSD

Matrix: Water

Analysis Batch: 308608

-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.52	U	50.0	55.0		ug/L		110	59 - 137	2	30
1,1,1-Trichloroethane	0.50	U	50.0	50.2		ug/L		100	57 - 142	2	30
1,1,2,2-Tetrachloroethane	0.50	U	50.0	65.1		ug/L		130	66 - 135	8	30

TestAmerica Pensacola

Prep Type: Total/NA

Client Sample ID: C5ES-MW0010I-022.5-20160527

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Spike

Added

50.0

Client: Geosyntec Consultants, Inc.

TestAmerica Job ID: 400-122302-1 Project/Site: VAB-LTM

MSD MSD

56.7

Result Qualifier

Unit

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Sample Sample

0.50

0.50 U

0.50 U

0.50 U

0.85 U

0.59 U

0.50 U

0.50 Ü

0.90 U

0.68 U

0.70 U

0.53 U

2.6 U

1.8 Ü

0.74 U

3.0 U

Result Qualifier

U

Lab Sample ID: 400-122302-1 MSD

Matrix: Water

1.1.2-Trichloroethane

cis-1,2-Dichloroethene

cis-1,3-Dichloropropene

Dibromochloromethane

Dichlorodifluoromethane

Dibromomethane

Ethylene Dibromide

Hexachlorobutadiene

Ethylbenzene

Iodomethane

Isopropyl ether

Isopropylbenzene

Methyl Ethyl Ketone

methyl isobutyl ketone

Methyl tert-butyl ether

Methylene Chloride

Analyte

Analysis Batch: 308608

Client Sample ID: C5ES-MW0010I-022.5-20160527

%Rec

113

Prep Type: Total/NA

RPD

2

%Rec.

Limits

66 - 131

RPD

Limit

30

8

ug/L 1.1-Dichloroethane 0.50 U 50.0 46.3 ug/L 93 61 - 144 30 1,1-Dichloroethene 0.50 U 50.0 53.6 107 54 _ 147 30 ug/L n 1,1-Dichloropropene 0.50 Ü 50.0 46.0 ug/L 92 65 - 136 30 1,2,3-Trichlorobenzene 0.70 U 50.0 58.2 ug/L 116 43 - 145 30 1,2,3-Trichloropropane 0.84 U 50.0 63.2 ug/L 126 65 - 133 10 30 ug/L 1,2,4-Trichlorobenzene 0.82 U 50.0 116 39 - 148 30 58.1 0 1,2,4-Trimethylbenzene 0.82 U 50.0 61.0 ug/L 122 50 - 139 3 30 1,2-Dibromo-3-Chloropropane 1.5 U 50.0 56.9 ug/L 114 45 - 135 13 30 50.0 119 2 1,2-Dichlorobenzene 0.50 U 59.3 ug/L 52 - 137 30 1,2-Dichloroethane 0.50 U 50.0 45.6 ug/L 91 60 - 141 30 50.0 90 30 1,2-Dichloropropane 0.50 U 44.9 ug/L 66 - 13750.0 127 30 1,3,5-Trimethylbenzene 0.56 Ù 63.3 ug/L 52 - 135 121 30 1,3-Dichlorobenzene U 50.0 60.5 54 - 135 0.54 ug/L 1,3-Dichloropropane 50.0 52.7 ug/L 105 66 - 133 30 0.50 U 122 1,4-Dichlorobenzene 0.64 U 50.0 612 ug/L 53 135 30 2,2-Dichloropropane 0.50 U 50.0 46.9 ug/L 94 42 - 144 0 31 2-Chlorotoluene 0.57 U 50.0 59.1 ug/L 118 53 - 134 3 30 2-Hexanone 3.1 Ü 200 203 ug/L 102 65 - 140 10 30 4-Chlorotoluene 0.56 U 50.0 59.8 120 54 - 133 0 30 ug/L Acetone 200 185 ug/L 87 43 - 160 13 30 11 Benzene 0.38 U 50.0 49.9 ug/L 100 56 - 142 1 30 Bromobenzene 0.54 U 50.0 61.2 ug/L 122 59 - 136 2 30 Bromochloromethane 0.52 U 50.0 49.0 ug/L 98 64 - 140 30 100 2 30 Bromodichloromethane 0.50 U 50.0 49.9 ug/L 59 - 143 Bromoform 0.71 U 50.0 54.8 ug/L 110 50 - 140 30 Bromomethane 50.0 0.98 U 34.4 ug/L 69 10 - 160 25 50 Carbon disulfide 50.0 51.7 ug/L 101 48 - 152 2 30 1.3 Carbon tetrachloride 50.0 48.3 97 55 - 145 30 0.50 U ug/L Chlorobenzene 0.50 U 50.0 55.9 ug/L 112 64 - 13030 ug/L Chloroethane Ü 50.0 51.1 102 50 - 151 30 0.76 Chloroform 0.60 U 50.0 47.3 ug/L 95 60 - 141 O 30 Chloromethane 0.83 U 50.0 38.7 ug/L 77 49 - 148 31

50.0

50.0

50.0

50.0

50.0

50.0

50.0

50.0

50.0

50.0

50.0

200

200

50.0

50.0

47.9

48.8

58.0

47.9

47 4

56 4

58.3

55.6

57 2

44.9

58.9

187

180

47.4

49.9

ug/L

96

98

116

96

95

113

117

111

114

90

118

94

90

95

100

59 - 143

57 - 140

56 - 143

63 - 138

16 - 160

58 - 131

64 - 132

31 - 149

20 - 160

60 - 144

56 - 133

55 - 150

63 - 146

59 - 137

60 - 146

30

30

30

30

31

30

30

36

44

30

30

30

30

30

32

3

3

9

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122302-1 MSD

Matrix: Water

Analysis Batch: 308608

Client Sample ID: C5ES-MW0010I-022.5-20160527

Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
m-Xylene & p-Xylene	1.6	U	50.0	56.8	-	ug/L		114	57 - 130	1	30
Naphthalene	1.0	U	50.0	61.5		ug/L		123	25 - 160	9	30
n-Butylbenzene	0.76	U	50.0	59.6		ug/L		119	41 - 142	0	31
N-Propylbenzene	0.69	U	50.0	60.2		ug/L		120	51 - 138	1	30
o-Xylene	0.60	U	50.0	58.0		ug/L		116	61 - 130	1	30
p-Cymene	0.71	U	50.0	58.1		ug/L		116	48 - 139	2	30
sec-Butylbenzene	0.70	U	50.0	62.9		ug/L		126	50 - 138	3	30
Styrene	1.0	U	50.0	56.5		ug/L		113	58 - 131	1	30
tert-Butylbenzene	0.63	U	50.0	61.2		ug/L		122	54 - 146	2	30
Tetrachloroethene	0.58	U	50.0	55.3		ug/L		111	52 - 133	1	30
Toluene	0.70	U	50.0	55.9		ug/L		112	65 - 130	0	30
trans-1,2-Dichloroethene	0.50	U	50.0	50.6		ug/L		101	61 - 143	0	30
trans-1,3-Dichloropropene	0.50	U	50.0	52.7		ug/L		105	53 - 133	3	30
Trichloroethene	0.50	U	50.0	50.0		ug/L		100	64 - 136	1	30
Trichlorofluoromethane	0.52	U	50.0	51.7		ug/L		103	54 - 156	3	30
Vinyl acetate	2.0	U	100	94.4		ug/L		94	26 - 160	5	33
Vinyl chloride	0.50	U	50.0	39.6		ug/L		79	46 - 152	1	30

MSD MSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene	106	78 - 118
Dibromofluoromethane	96	81 - 121
Toluene-d8 (Surr)	108	80 - 120

Lab Sample ID: MB 400-308665/4

Matrix: Water

Analysis Batch: 308665

Client Sample ID: Method Blank **Prep Type: Total/NA**

•	MB	MB							
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U -	1.0	0.52	ug/L			06/05/16 07:58	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/05/16 07:58	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/05/16 07:58	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/05/16 07:58	1
1,2,4-Trichlorobenzene	0.82	Ü	1.0	0.82	ug/L			06/05/16 07:58	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/05/16 07:58	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/05/16 07:58	1
1,2-Dichlorobenzene	0.50	Ü	1.0	0.50	ug/L			06/05/16 07:58	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,3,5-Trimethylbenzene	0.56	Ü	1.0	0.56	ug/L			06/05/16 07:58	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/05/16 07:58	1
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
1,4-Dichlorobenzene	0.64	U	1.0	0.64	ug/L			06/05/16 07:58	1
2,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1

TestAmerica Pensacola

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Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Method Blank Prep Type: Total/NA

Lab Sample ID: MB 400-308665/4

Matrix: Water

Analyte 2-Chlorotoluene 2-Hexanone 4-Chlorotoluene Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotomethane Chlorotomethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromomethane Dichlorodifluoromethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	Result 0.57 3.1 0.56 10 0.38 0.54 0.52	U U U	PQL 1.0 25 1.0 25	3.1	ug/L	<u>D</u>	Prepared	Analyzed 06/05/16 07:58	Dil Fac
2-Hexanone 4-Chlorotoluene Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotomethane Chlorotomethane Chlorotomethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	3.1 0.56 10 0.38 0.54	U U U	25 1.0	3.1				06/05/16 07:58	1
4-Chlorotoluene Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorothane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.56 10 0.38 0.54	U U	1.0		/				
Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorobenzene Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	10 0.38 0.54	Ü			ug/L			06/05/16 07:58	1
Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.38 0.54	U	25	0.56	ug/L			06/05/16 07:58	1
Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dibromomethane Ethylbenzene Ethylene Dibromide	0.54			10	ug/L			06/05/16 07:58	1
Bromochloromethane Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dibromomethane Ethylbenzene Ethylene Dibromide			1.0	0.38	ug/L			06/05/16 07:58	1
Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.52	U	1.0	0.54	ug/L			06/05/16 07:58	1
Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide		U	1.0	0.52	ug/L			06/05/16 07:58	1
Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane Chloromethane Cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.71	U	5.0	0.71	ug/L			06/05/16 07:58	1
Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.98	U	1.0	0.98	ug/L			06/05/16 07:58	1
Chlorobenzene Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.50	U	1.0	0.50	ug/L			06/05/16 07:58	1
Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.50	U	1.0		ug/L			06/05/16 07:58	1
Chloroform Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.50	U	1.0		ug/L			06/05/16 07:58	1
Chloromethane cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.76	U	1.0		ug/L			06/05/16 07:58	1
cis-1,2-Dichloroethene cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.60	U	1.0		ug/L			06/05/16 07:58	1
cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.83	U	1.0		ug/L			06/05/16 07:58	1
cis-1,3-Dichloropropene Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.50	Ū	1.0		ug/L			06/05/16 07:58	1
Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.50		5.0		ug/L			06/05/16 07:58	1
Dibromomethane Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 07:58	1
Dichlorodifluoromethane Ethylbenzene Ethylene Dibromide	0.59		5.0		ug/L			06/05/16 07:58	1
Ethylbenzene Ethylene Dibromide	0.85		1.0		ug/L			06/05/16 07:58	1
Ethylene Dibromide	0.50		1.0		ug/L			06/05/16 07:58	1
•	0.50		1.0		ug/L			06/05/16 07:58	· · · · · · · · · · · · · · · · · · ·
Hexachlorobutadiene	0.90		5.0	0.90	_			06/05/16 07:58	
Iodomethane	0.68		1.0		ug/L			06/05/16 07:58	1
Isopropyl ether	0.70		1.0		ug/L			06/05/16 07:58	· · · · · · · · · · · · · · · · · · ·
Isopropylbenzene	0.73		1.0		ug/L			06/05/16 07:58	1
Methyl Ethyl Ketone	2.6		25		ug/L			06/05/16 07:58	1
methyl isobutyl ketone	1.8		25		ug/L			06/05/16 07:58	
Methyl tert-butyl ether	0.74		1.0		ug/L			06/05/16 07:58	1
Methylene Chloride	3.0		5.0		ug/L			06/05/16 07:58	1
m-Xylene & p-Xylene	1.6		5.0		ug/L			06/05/16 07:58	
Naphthalene	1.0		1.0		ug/L ug/L			06/05/16 07:58	1
n-Butylbenzene	0.76		1.0		ug/L			06/05/16 07:58	1
N-Propylbenzene	0.70		1.0		ug/L ug/L			06/05/16 07:58	1
	0.69				_				•
o-Xylene	0.60		5.0 1.0		ug/L ug/L			06/05/16 07:58 06/05/16 07:58	1
p-Cymene	0.71				_			06/05/16 07:58	1
sec-Butylbenzene			1.0		ug/L				1
Styrene	1.0		1.0		ug/L			06/05/16 07:58	1
tert-Butylbenzene	0.63		1.0		ug/L			06/05/16 07:58	1
Tetrachloroethene	0.58		1.0		ug/L			06/05/16 07:58	1
Toluene	0.70		1.0		ug/L			06/05/16 07:58	1
trans-1,2-Dichloroethene	0.50		1.0		ug/L			06/05/16 07:58	1
trans-1,3-Dichloropropene	0.50		5.0		ug/L			06/05/16 07:58	1
Trichloroethene	0.50		1.0		ug/L			06/05/16 07:58	1
Trichlorofluoromethane	0.52		1.0		ug/L			06/05/16 07:58 06/05/16 07:58	1
Vinyl acetate Vinyl chloride	2.0	H	25	2 0	ug/L			いたいしにはり ロフ・こう	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Method Blank

Lab Sample ID: MB 400-308665/4

Matrix: Water

Analysis Batch: 308665

Prep Type: Total/NA

	MB	МВ					
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		78 - 118	-		06/05/16 07:58	1
Dibromofluoromethane	100		81 - 121			06/05/16 07:58	1
Toluene-d8 (Surr)	96		80 - 120			06/05/16 07:58	1
	4-Bromofluorobenzene Dibromofluoromethane	Surrogate %Recovery 4-Bromofluorobenzene 94 Dibromofluoromethane 100	4-Bromofluorobenzene 94 Dibromofluoromethane 100	Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 94 78 - 118 Dibromofluoromethane 100 81 - 121	Surrogate%RecoveryQualifierLimits4-Bromofluorobenzene9478 - 118Dibromofluoromethane10081 - 121	Surrogate%RecoveryQualifierLimitsPrepared4-Bromofluorobenzene9478 - 118Dibromofluoromethane10081 - 121	Surrogate %Recovery Qualifier Limits Prepared Analyzed 4-Bromofluorobenzene 94 78 - 118 06/05/16 07:58 Dibromofluoromethane 100 81 - 121 06/05/16 07:58

Lab Sample ID: LCS 400-308665/1002

Matrix: Water

Client Sample	ID:	Lab	Co	ntro	I Sa	mple
		Prep	T	ype:	Tota	I/NA

Analysis Batch: 308665	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	50.0	53.7		ug/L		107	67 - 131
1,1,1-Trichloroethane	50.0	54.5		ug/L		109	68 - 130
1,1,2,2-Tetrachloroethane	50.0	59.1		ug/L		118	70 - 131
1,1,2-Trichloroethane	50.0	54.7		ug/L		109	70 - 130
1,1-Dichloroethane	50.0	50.5		ug/L		101	70 - 130
1,1-Dichloroethene	50.0	58.9		ug/L		118	63 - 134
1,1-Dichloropropene	50.0	49.2		ug/L		98	70 - 130
1,2,3-Trichlorobenzene	50.0	53.7		ug/L		107	60 - 138
1,2,3-Trichloropropane	50.0	56.1		ug/L		112	70 - 130
1,2,4-Trichlorobenzene	50.0	56.1		ug/L		112	60 - 140
1,2,4-Trimethylbenzene	50.0	54.1		ug/L		108	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	55.2		ug/L		110	54 - 135
1,2-Dichlorobenzene	50.0	54.9		ug/L		110	67 - 130
1,2-Dichloroethane	50.0	49.4		ug/L		99	69 - 130
1,2-Dichloropropane	50.0	48.6		ug/L		97	70 - 130
1,3,5-Trimethylbenzene	50.0	56.9		ug/L		114	69 - 130
1,3-Dichlorobenzene	50.0	56.0		ug/L		112	70 - 130
1,3-Dichloropropane	50.0	49.7		ug/L		99	70 - 130
1,4-Dichlorobenzene	50.0	56.9		ug/L		114	70 - 130
2,2-Dichloropropane	50.0	50.5		ug/L		101	52 - 135
2-Chlorotoluene	50.0	55.2		ug/L		110	70 - 130
2-Hexanone	200	205		ug/L		102	65 - 137
4-Chlorotoluene	50.0	55.1		ug/L		110	70 - 130
Acetone	200	213		ug/L		106	43 - 160
Benzene	50.0	53.5		ug/L		107	70 - 130
Bromobenzene	50.0	55.6		ug/L		111	70 - 132
Bromochloromethane	50.0	54.6		ug/L		109	70 - 130
Bromodichloromethane	50.0	54.1		ug/L		108	67 - 133
Bromoform	50.0	55.1		ug/L		110	57 - 140
Bromomethane	50.0	42.4		ug/L		85	10 - 160
Carbon disulfide	50.0	54.0		ug/L		108	61 - 137
Carbon tetrachloride	50.0	53.3		ug/L		107	61 - 137
Chlorobenzene	50.0	53.5		ug/L		107	70 - 130
Chloroethane	50.0	56.3		ug/L		113	55 - 141
Chloroform	50.0	51.7		ug/L		103	69 - 130
Chloromethane	50.0	47.3		ug/L		95	58 - 137
cis-1,2-Dichloroethene	50.0	51.1		ug/L		102	68 - 130
cis-1,3-Dichloropropene	50.0	52.8		ug/L		106	69 - 132
Dibromochloromethane	50.0	56.4		ug/L		113	67 - 135

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-308665/1002

Matrix: Water

Analysis Batch: 308665

Client Sample ID: Lab Control Sample Prep Type: Total/NA

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Dibromomethane	50.0	52.0		ug/L		104	70 - 130
Dichlorodifluoromethane	50.0	57.0		ug/L		114	41 - 146
Ethylbenzene	50.0	53.8		ug/L		108	70 - 130
Ethylene Dibromide	50.0	55.7		ug/L		111	70 - 130
Hexachlorobutadiene	50.0	51.2		ug/L		102	53 - 140
Iodomethane	50.0	39.3		ug/L		79	27 - 159
Isopropyl ether	50.0	51.4		ug/L		103	64 - 132
Isopropylbenzene	50.0	57.1		ug/L		114	70 - 130
Methyl Ethyl Ketone	200	217		ug/L		108	61 - 145
methyl isobutyl ketone	200	201		ug/L		101	69 - 138
Methyl tert-butyl ether	50.0	51.3		ug/L		103	66 - 130
Methylene Chloride	50.0	54.7		ug/L		109	66 - 135
m-Xylene & p-Xylene	50.0	54.8		ug/L		110	70 - 130
Naphthalene	50.0	55.2		ug/L		110	47 - 149
n-Butylbenzene	50.0	54.7		ug/L		109	67 - 130
N-Propylbenzene	50.0	53.7		ug/L		107	70 - 130
o-Xylene	50.0	55.8		ug/L		112	70 - 130
p-Cymene	50.0	53.1		ug/L		106	65 - 130
sec-Butylbenzene	50.0	56.3		ug/L		113	66 - 130
Styrene	50.0	54.6		ug/L		109	70 - 130
tert-Butylbenzene	50.0	55.8		ug/L		112	64 - 139
Tetrachloroethene	50.0	54.8		ug/L		110	65 - 130
Toluene	50.0	53.8		ug/L		108	70 - 130
trans-1,2-Dichloroethene	50.0	54.7		ug/L		109	70 - 130
trans-1,3-Dichloropropene	50.0	50.9		ug/L		102	63 - 130
Trichloroethene	50.0	54.6		ug/L		109	70 - 130
Trichlorofluoromethane	50.0	61.3		ug/L		123	65 ₋ 138
Vinyl acetate	100	109		ug/L		109	26 - 160
Vinyl chloride	50.0	50.6		ug/L		101	59 ₋ 136

LCS LCS

Surrogate	%Recovery Qualifie	er Limits
4-Bromofluorobenzene	99	78 - 118
Dibromofluoromethane	99	81 - 121
Toluene-d8 (Surr)	101	80 - 120

Lab Sample ID: 400-122302-4 MS

Matrix: Water

Analysis Batch: 308665

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	0.52	U	50.0	51.0		ug/L		102	59 - 137	
1,1,1-Trichloroethane	0.50	U	50.0	54.7		ug/L		109	57 ₋ 142	
1,1,2,2-Tetrachloroethane	0.50	U	50.0	54.5		ug/L		109	66 - 135	
1,1,2-Trichloroethane	0.50	U	50.0	52.6		ug/L		105	66 - 131	
1,1-Dichloroethane	0.50	U	50.0	50.2		ug/L		100	61 - 144	
1,1-Dichloroethene	0.50	U	50.0	59.8		ug/L		120	54 - 147	
1,1-Dichloropropene	0.50	U	50.0	49.1		ug/L		98	65 - 136	
1,2,3-Trichlorobenzene	0.70	U	50.0	50.0		ug/L		100	43 - 145	

TestAmerica Pensacola

Prep Type: Total/NA

Client Sample ID: C5ES-MW0017S-009.5-20160527

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Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: C5ES-MW0017S-009.5-20160527 Prep Type: Total/NA

Lab Sample ID: 400-122302-4 MS

Matrix: Water

Analysis Batch: 308665

Analysis Batch: 308665	Sample	Sample	Spike	MS	MS			%Rec.	
Analyte	-	Qualifier	Added	_	Qualifier	Unit	D %Rec	Limits	
1,2,3-Trichloropropane	0.84		50.0	53.0	- Guainiei	ug/L	2 70100	65 - 133	— -
1,2,4-Trichlorobenzene	0.82		50.0	52.0		ug/L	104	39 - 148	
1,2,4-Trimethylbenzene	0.82		50.0	51.1		ug/L	102	50 ₋ 139	
1,2-Dibromo-3-Chloropropane	1.5		50.0	46.7		ug/L	93	45 - 135	
1,2-Dichlorobenzene	0.50		50.0	52.7		ug/L	105	52 - 137	
1,2-Dichloroethane	0.50		50.0	49.0		ug/L	98	60 - 141	
1,2-Dichloropropane	0.50		50.0	49.1		ug/L	98	66 - 137	
1,3,5-Trimethylbenzene	0.56		50.0	54.2		ug/L	108	52 - 135	
1.3-Dichlorobenzene	3.9	Ü	50.0	56.1		ug/L	104	54 - 135	
1,3-Dichloropropane	0.50	П	50.0	48.7		ug/L	97	66 - 133	
1,4-Dichlorobenzene	5.6		50.0	58.4		ug/L	106	53 - 135	
2,2-Dichloropropane	0.50	11	50.0	51.1		ug/L ug/L	102	42 - 144	
2-Chlorotoluene	0.57		50.0	51.6		ug/L ug/L	102	53 - 134	
2-Hexanone	3.1		200	182			91	65 - 140	
4-Chlorotoluene	0.56		50.0	51.7		ug/L ug/L	103	54 - 133	
	10		200	181			90	43 - 160	
Acetone	0.38					ug/L			
Benzene Bromobenzene	0.56		50.0	53.9		ug/L	108	56 ₋ 142	
			50.0	53.3		ug/L	107	59 ₋ 136	
Bromochloromethane	0.52		50.0	54.4		ug/L	109	64 - 140	
Bromodichloromethane	0.50		50.0	53.5		ug/L	107	59 ₋ 143	
Bromoform	0.71		50.0	49.2		ug/L	98	50 - 140	
Bromomethane	0.98		50.0	51.8		ug/L	104	10 - 160	
Carbon disulfide	0.50		50.0	54.3		ug/L	109	48 - 152	
Carbon tetrachloride	0.50		50.0	51.6		ug/L	103	55 - 145	
Chlorobenzene	0.95		50.0	52.8		ug/L	104	64 - 130	
Chloroethane	0.76		50.0	58.3		ug/L	117	50 - 151	
Chloroform	0.60		50.0	51.4		ug/L	103	60 - 141	
Chloromethane	0.83		50.0	46.9		ug/L	94	49 - 148	
cis-1,2-Dichloroethene	0.50		50.0	52.0		ug/L	104	59 - 143	
cis-1,3-Dichloropropene	0.50		50.0	51.6		ug/L	103	57 - 140	
Dibromochloromethane	0.50		50.0	53.3		ug/L	107	56 - 143	
Dibromomethane	0.59		50.0	51.7		ug/L	103	63 - 138	
Dichlorodifluoromethane	0.85		50.0	55.6		ug/L	111	16 - 160	
Ethylbenzene	0.50		50.0	51.9		ug/L	104	58 - 131	
Ethylene Dibromide	0.50		50.0	54.0		ug/L	108	64 - 132	
Hexachlorobutadiene	0.90		50.0	46.7		ug/L	93	31 - 149	
lodomethane	0.68		50.0	48.9		ug/L	98	20 - 160	
Isopropyl ether	0.70		50.0	53.0		ug/L	106	60 - 144	
Isopropylbenzene	0.53		50.0	54.4		ug/L	109	56 - 133	
Methyl Ethyl Ketone	2.6		200	194		ug/L	97	55 - 150	
methyl isobutyl ketone	1.8		200	189		ug/L	94	63 - 146	
Methyl tert-butyl ether	0.74		50.0	50.2		ug/L	100	59 - 137	
Methylene Chloride	3.0		50.0	55.4		ug/L	111	60 - 146	
m-Xylene & p-Xylene	1.6		50.0	52.2		ug/L	104	57 ₋ 130	
Naphthalene	1.0		50.0	50.3		ug/L	101	25 - 160	
n-Butylbenzene	0.76		50.0	50.3		ug/L	101	41 - 142	
N-Propylbenzene	0.69		50.0	51.1		ug/L	102	51 ₋ 138	
o-Xylene	0.60	U	50.0	53.5		ug/L	107	61 - 130	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122302-4 MS

Matrix: Water

Analysis Batch: 308665

Client Sample ID: C5ES-MW0017S-009.5-20160527

Prep Type: Total/NA

Sample	Sample	Spike	IVIO	MS				%Rec.	
Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
0.71	U	50.0	49.2		ug/L		98	48 - 139	
0.70	Ü	50.0	52.7		ug/L		105	50 - 138	
1.0	U	50.0	52.6		ug/L		105	58 - 131	
0.63	U	50.0	52.9		ug/L		106	54 - 146	
0.58	Ü	50.0	52.1		ug/L		104	52 - 133	
0.70	U	50.0	52.2		ug/L		104	65 - 130	
0.50	U	50.0	55.3		ug/L		111	61 - 143	
0.50	U	50.0	48.5		ug/L		97	53 - 133	
0.50	U	50.0	54.2		ug/L		108	64 - 136	
0.52	U	50.0	62.6		ug/L		125	54 ₋ 156	
2.0	U	100	109		ug/L		109	26 - 160	
0.50	U	50.0	51.6		ug/L		103	46 - 152	
	Result 0.71 0.70 1.0 0.63 0.58 0.70 0.50 0.50 0.52 2.0	Result Qualifier 0.71 U 0.70 U 1.0 U 0.63 U 0.58 U 0.70 U 0.50 U 0.50 U 0.50 U 0.52 U 2.0 U 0.50 U	Result Qualifier Added 0.71 U 50.0 0.70 U 50.0 1.0 U 50.0 0.63 U 50.0 0.58 U 50.0 0.70 U 50.0 0.50 U 50.0 0.50 U 50.0 0.50 U 50.0 0.52 U 50.0 2.0 U 100	Result Qualifier Added Result 0.71 U 50.0 49.2 0.70 U 50.0 52.7 1.0 U 50.0 52.6 0.63 U 50.0 52.9 0.58 U 50.0 52.1 0.70 U 50.0 52.2 0.50 U 50.0 55.3 0.50 U 50.0 48.5 0.50 U 50.0 54.2 0.52 U 50.0 62.6 2.0 U 100 109	Result 0.71 U Added 50.0 Result 49.2 0.70 U 50.0 52.7 1.0 U 50.0 52.6 0.63 U 50.0 52.9 0.58 U 50.0 52.1 0.70 U 50.0 52.2 0.50 U 50.0 55.3 0.50 U 50.0 48.5 0.50 U 50.0 54.2 0.52 U 50.0 62.6 2.0 U 100 109	Result Qualifier Added Result Qualifier Unit 0.71 U 50.0 49.2 ug/L 0.70 U 50.0 52.7 ug/L 1.0 U 50.0 52.6 ug/L 0.63 U 50.0 52.9 ug/L 0.58 U 50.0 52.1 ug/L 0.70 U 50.0 52.2 ug/L 0.50 U 50.0 55.3 ug/L 0.50 U 50.0 48.5 ug/L 0.50 U 50.0 54.2 ug/L 0.52 U 50.0 62.6 ug/L 2.0 U 100 109 ug/L	Result Qualifier Added Result Qualifier Unit D 0.71 U 50.0 49.2 ug/L ug/L 0.70 U 50.0 52.7 ug/L 1.0 U 50.0 52.6 ug/L 0.63 U 50.0 52.9 ug/L 0.58 U 50.0 52.1 ug/L 0.70 U 50.0 52.2 ug/L 0.50 U 50.0 55.3 ug/L 0.50 U 50.0 48.5 ug/L 0.50 U 50.0 54.2 ug/L 0.52 U 50.0 62.6 ug/L 2.0 U 100 109 ug/L	Result 0.71 Qualifier Added 50.0 Result 49.2 Qualifier ug/L D %Rec ug/L 98 0.70 U 50.0 52.7 ug/L 105 1.0 U 50.0 52.6 ug/L 105 0.63 U 50.0 52.9 ug/L 106 0.58 U 50.0 52.1 ug/L 104 0.70 U 50.0 52.2 ug/L 104 0.50 U 50.0 55.3 ug/L 111 0.50 U 50.0 48.5 ug/L 97 0.50 U 50.0 54.2 ug/L 108 0.52 U 50.0 62.6 ug/L 125 2.0 U 100 109 ug/L 109	Result Oualifier Added Added Added Result Qualifier Unit Up/L D %Rec Umits Limits 0.71 U 50.0 49.2 ug/L 98 48 - 139 0.70 U 50.0 52.7 ug/L 105 50 - 138 1.0 U 50.0 52.6 ug/L 105 58 - 131 0.63 U 50.0 52.9 ug/L 106 54 - 146 0.58 U 50.0 52.1 ug/L 104 52 - 133 0.70 U 50.0 52.2 ug/L 104 65 - 130 0.50 U 50.0 55.3 ug/L 111 61 - 143 0.50 U 50.0 48.5 ug/L 97 53 - 133 0.50 U 50.0 54.2 ug/L 108 64 - 136 0.52 U 50.0 62.6 ug/L 125 54 - 156 2.0 U 100 109 ug/L 109 26 - 160

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	102		78 - 118
Dibromofluoromethane	100		81 - 121
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: 400-122302-4 MSD

Matrix: Water

Analysis Batch: 308665

Client Sample ID: C5ES-MW0017S-009.5-20160527
Pron Type: Total/NA

Analysis Daten. 300003	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.52	U	50.0	49.3		ug/L		99	59 - 137	3	30
1,1,1-Trichloroethane	0.50	U	50.0	53.5		ug/L		107	57 - 142	2	30
1,1,2,2-Tetrachloroethane	0.50	U	50.0	53.4		ug/L		107	66 - 135	2	30
1,1,2-Trichloroethane	0.50	U	50.0	51.2		ug/L		102	66 - 131	3	30
1,1-Dichloroethane	0.50	U	50.0	50.2		ug/L		100	61 - 144	0	30
1,1-Dichloroethene	0.50	U	50.0	58.1		ug/L		116	54 - 147	3	30
1,1-Dichloropropene	0.50	U	50.0	48.2		ug/L		96	65 - 136	2	30
1,2,3-Trichlorobenzene	0.70	U	50.0	43.3		ug/L		87	43 - 145	14	30
1,2,3-Trichloropropane	0.84	U	50.0	52.1		ug/L		104	65 - 133	2	30
1,2,4-Trichlorobenzene	0.82	U	50.0	44.6		ug/L		89	39 - 148	15	30
1,2,4-Trimethylbenzene	0.82	U	50.0	44.9		ug/L		90	50 - 139	13	30
1,2-Dibromo-3-Chloropropane	1.5	U	50.0	45.2		ug/L		90	45 - 135	3	30
1,2-Dichlorobenzene	0.50	U	50.0	46.8		ug/L		94	52 - 137	12	30
1,2-Dichloroethane	0.50	U	50.0	47.5		ug/L		95	60 - 141	3	30
1,2-Dichloropropane	0.50	U	50.0	47.5		ug/L		95	66 - 137	3	30
1,3,5-Trimethylbenzene	0.56	Ü	50.0	49.1		ug/L		98	52 - 135	10	30
1,3-Dichlorobenzene	3.9		50.0	50.4		ug/L		93	54 - 135	11	30
1,3-Dichloropropane	0.50	U	50.0	47.4		ug/L		95	66 - 133	3	30
1,4-Dichlorobenzene	5.6		50.0	52.2		ug/L		93	53 - 135	11	30
2,2-Dichloropropane	0.50	U	50.0	50.0		ug/L		100	42 - 144	2	31
2-Chlorotoluene	0.57	U	50.0	46.2		ug/L		92	53 - 134	11	30
2-Hexanone	3.1	U	200	177		ug/L		88	65 - 140	3	30
4-Chlorotoluene	0.56	U	50.0	46.2		ug/L		92	54 - 133	11	30
Acetone	10	U	200	181		ug/L		90	43 - 160	0	30
Benzene	0.38	U	50.0	52.7		ug/L		105	56 - 142	2	30

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122302-4 MSD

Matrix: Water

Analysis Batch: 308665

Client Sample ID: C5ES-MW0017S-009.5-20160527 **Prep Type: Total/NA**

	Sample	Sample	Spike	MSD	MSD				%Rec.		RP
Analyte	Result	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Bromobenzene	0.54	U	50.0	49.7		ug/L		99	59 - 136	7	30
Bromochloromethane	0.52	U	50.0	52.8		ug/L		106	64 - 140	3	30
Bromodichloromethane	0.50	U	50.0	52.2		ug/L		104	59 - 143	2	30
Bromoform	0.71	U	50.0	47.5		ug/L		95	50 - 140	4	30
Bromomethane	0.98	U	50.0	53.5		ug/L		107	10 - 160	3	50
Carbon disulfide	0.50	U	50.0	52.8		ug/L		106	48 - 152	3	30
Carbon tetrachloride	0.50	U	50.0	51.0		ug/L		102	55 - 145	1	30
Chlorobenzene	0.95	I	50.0	49.7		ug/L		97	64 - 130	6	30
Chloroethane	0.76	U	50.0	54.9		ug/L		110	50 - 151	6	30
Chloroform	0.60	U	50.0	50.8		ug/L		102	60 - 141	1	30
Chloromethane	0.83	U	50.0	45.6		ug/L		91	49 - 148	3	3
cis-1,2-Dichloroethene	0.50	U	50.0	50.9		ug/L		102	59 - 143	2	30
cis-1,3-Dichloropropene	0.50	U	50.0	49.9		ug/L		100	57 - 140	3	30
Dibromochloromethane	0.50	U	50.0	52.3		ug/L		105	56 - 143	2	30
Dibromomethane	0.59	U	50.0	50.2		ug/L		100	63 - 138	3	30
Dichlorodifluoromethane	0.85	U	50.0	53.6		ug/L		107	16 - 160	4	3
Ethylbenzene	0.50	U	50.0	48.6		ug/L		97	58 - 131	7	30
Ethylene Dibromide	0.50	U	50.0	52.3		ug/L		105	64 - 132	3	30
Hexachlorobutadiene	0.90	U	50.0	38.9		ug/L		78	31 - 149	18	36
Iodomethane	0.68	U	50.0	53.4		ug/L		107	20 - 160	9	44
Isopropyl ether	0.70	U	50.0	47.0		ug/L		94	60 - 144	12	30
Isopropylbenzene	0.53	U	50.0	50.2		ug/L		100	56 - 133	8	30
Methyl Ethyl Ketone	2.6	U	200	188		ug/L		94	55 - 150	3	30
methyl isobutyl ketone	1.8	U	200	183		ug/L		91	63 - 146	3	30
Methyl tert-butyl ether	0.74	U	50.0	49.5		ug/L		99	59 - 137	2	30
Methylene Chloride	3.0	U	50.0	53.9		ug/L		108	60 - 146	3	32
m-Xylene & p-Xylene	1.6	U	50.0	48.7		ug/L		97	57 ₋ 130	7	30
Naphthalene	1.0	U	50.0	47.6		ug/L		95	25 - 160	5	30
n-Butylbenzene	0.76	U	50.0	42.0		ug/L		84	41 - 142	18	3
N-Propylbenzene	0.69	U	50.0	45.7		ug/L		91	51 - 138	11	30
o-Xylene	0.60		50.0	49.9		ug/L		100	61 - 130	7	30
p-Cymene	0.71	U	50.0	42.6		ug/L		85	48 - 139	14	30
sec-Butylbenzene	0.70	U	50.0	47.0		ug/L		94	50 - 138	11	30
Styrene	1.0		50.0	48.5		ug/L		97	58 - 131	8	30
tert-Butylbenzene	0.63	U	50.0	48.0		ug/L		96	54 - 146	10	30
Tetrachloroethene	0.58		50.0	49.6		ug/L		99	52 - 133	5	30
Toluene	0.70		50.0	50.2		ug/L		100	65 - 130	4	30
trans-1,2-Dichloroethene	0.50		50.0	54.0		ug/L		108	61 - 143	2	30
trans-1,3-Dichloropropene	0.50		50.0	47.0		ug/L		94	53 - 133	3	30
Trichloroethene	0.50		50.0	52.3		ug/L		105	64 - 136	3	30
Trichlorofluoromethane	0.52		50.0	59.0		ug/L		118	54 - 156	6	30
Vinyl acetate	2.0		100	101		ug/L		101	26 - 160	7	33
Vinyl chloride	0.50	U	50.0	49.1		ug/L		98	46 - 152	5	30

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	103		78 - 118
Dibromofluoromethane	99		81 - 121
Toluene-d8 (Surr)	101		80 - 120

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Method Blank

Prep Type: Total/NA

Lab Sample ID: MB 400-308685/4

Matrix: Water

Analysis Batch: 308685

		МВ							
Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	0.52		1.0	0.52	-			06/06/16 09:48	
1,1,1-Trichloroethane	0.50	U	1.0		ug/L			06/06/16 09:48	
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	-			06/06/16 09:48	
,1,2-Trichloroethane	0.50	U	5.0	0.50	-			06/06/16 09:48	
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	
,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 09:48	
,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 09:48	
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 09:48	
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 09:48	
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 09:48	
,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	
I,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	
,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	
,3,5-Trimethylbenzene	0.56	U	1.0	0.56	ug/L			06/06/16 09:48	
,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/06/16 09:48	
,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	
,4-Dichlorobenzene	0.64	U	1.0	0.64	ug/L			06/06/16 09:48	
,2-Dichloropropane	0.50	U	1.0		ug/L			06/06/16 09:48	
-Chlorotoluene	0.57	U	1.0		ug/L			06/06/16 09:48	
-Hexanone	3.1		25		ug/L			06/06/16 09:48	
-Chlorotoluene	0.56	U	1.0		ug/L			06/06/16 09:48	
cetone	10	U	25		ug/L			06/06/16 09:48	
enzene	0.38	U	1.0		ug/L			06/06/16 09:48	
romobenzene	0.54	U	1.0		ug/L			06/06/16 09:48	
romochloromethane	0.52	U	1.0		ug/L			06/06/16 09:48	
romodichloromethane	0.50	U	1.0		ug/L			06/06/16 09:48	
Bromoform	0.71	U	5.0		ug/L			06/06/16 09:48	
romomethane	0.98	U	1.0		ug/L			06/06/16 09:48	
carbon disulfide	0.50	U	1.0	0.50	-			06/06/16 09:48	
Carbon tetrachloride	0.50		1.0		ug/L			06/06/16 09:48	
hlorobenzene	0.50		1.0		ug/L			06/06/16 09:48	
hloroethane	0.76		1.0		ug/L			06/06/16 09:48	
hloroform	0.60	U	1.0	0.60	-			06/06/16 09:48	
Chloromethane	0.83	U	1.0		ug/L			06/06/16 09:48	
is-1,2-Dichloroethene	0.50		1.0	0.50				06/06/16 09:48	
is-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 09:48	
Dibromochloromethane	0.50		1.0		ug/L			06/06/16 09:48	
ibromomethane	0.59		5.0		ug/L			06/06/16 09:48	
Dichlorodifluoromethane	0.85		1.0		ug/L			06/06/16 09:48	
thylbenzene	0.50		1.0		ug/L			06/06/16 09:48	
thylene Dibromide	0.50		1.0		ug/L			06/06/16 09:48	
exachlorobutadiene	0.90		5.0		ug/L			06/06/16 09:48	
odomethane	0.90		1.0		ug/L			06/06/16 09:48	
sopropyl ether	0.70		1.0		ug/L			06/06/16 09:48	
sopropylbenzene	0.70		1.0		ug/L			06/06/16 09:48	
Methyl Ethyl Ketone	2.6		25					06/06/16 09:48	
					ug/L				
nethyl isobutyl ketone Methyl tert-butyl ether	1.8 0.74		25 1.0		ug/L ug/L			06/06/16 09:48 06/06/16 09:48	

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-308685/4 **Client Sample ID: Method Blank Matrix: Water Prep Type: Total/NA**

Analysis Batch: 308685

-	MB	MB							
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/06/16 09:48	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/06/16 09:48	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/06/16 09:48	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/06/16 09:48	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/06/16 09:48	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/06/16 09:48	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/06/16 09:48	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/06/16 09:48	1
Styrene	1.0	U	1.0	1.0	ug/L			06/06/16 09:48	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/06/16 09:48	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/06/16 09:48	1
Toluene	0.70	U	1.0	0.70	ug/L			06/06/16 09:48	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 09:48	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/06/16 09:48	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/06/16 09:48	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/06/16 09:48	1

MB MB %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analyzed 4-Bromofluorobenzene 94 78 - 118 06/06/16 09:48 Dibromofluoromethane 98 81 - 121 06/06/16 09:48 Toluene-d8 (Surr) 99 80 - 120 06/06/16 09:48

Lab Sample ID: LCS 400-308685/1002

Matrix: Water

Analysis Batch: 308685								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	50.0	52.5		ug/L		105	67 - 131	. ——
1,1,1-Trichloroethane	50.0	48.9		ug/L		98	68 - 130	
1,1,2,2-Tetrachloroethane	50.0	55.0		ug/L		110	70 - 131	
1,1,2-Trichloroethane	50.0	54.3		ug/L		109	70 - 130	
1,1-Dichloroethane	50.0	44.4		ug/L		89	70 - 130	
1,1-Dichloroethene	50.0	52.4		ug/L		105	63 - 134	
1,1-Dichloropropene	50.0	44.2		ug/L		88	70 - 130	
1,2,3-Trichlorobenzene	50.0	50.3		ug/L		101	60 - 138	
1,2,3-Trichloropropane	50.0	53.0		ug/L		106	70 - 130	
1,2,4-Trichlorobenzene	50.0	52.6		ug/L		105	60 - 140	
1,2,4-Trimethylbenzene	50.0	50.7		ug/L		101	70 - 130	
1,2-Dibromo-3-Chloropropane	50.0	48.2		ug/L		96	54 - 135	
1,2-Dichlorobenzene	50.0	52.4		ug/L		105	67 - 130	
1,2-Dichloroethane	50.0	43.7		ug/L		87	69 - 130	
1,2-Dichloropropane	50.0	43.6		ug/L		87	70 - 130	
1,3,5-Trimethylbenzene	50.0	53.9		ug/L		108	69 - 130	
1,3-Dichlorobenzene	50.0	53.1		ug/L		106	70 - 130	
1,3-Dichloropropane	50.0	49.4		ug/L		99	70 - 130	
1,4-Dichlorobenzene	50.0	53.2		ug/L		106	70 - 130	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-308685/1002

Matrix: Water

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Analysis Batch: 308685	Spike	LCS	LCS				%Rec.	
Analyte	Added		Qualifier	Unit	D	%Rec	Limits	
2,2-Dichloropropane	50.0	45.1	- Guainici	ug/L	_ =	90	52 - 135	
2-Chlorotoluene	50.0	50.7		ug/L		101	70 - 130	
2-Hexanone	200	198		ug/L		99	65 - 137	
4-Chlorotoluene	50.0	51.1		ug/L		102	70 - 130	
Acetone	200	196		ug/L		98	43 - 160	
Benzene	50.0	48.0		ug/L		96	70 - 130	
Bromobenzene	50.0	52.7		ug/L		105	70 - 132	
Bromochloromethane	50.0	48.1		ug/L		96	70 - 130	
Bromodichloromethane	50.0	48.6		ug/L		97	67 - 133	
Bromoform	50.0	53.6		ug/L		107	57 - 140	
Bromomethane	50.0	35.7		ug/L		71	10 - 160	
Carbon disulfide	50.0	48.5		ug/L		97	61 - 137	
Carbon tetrachloride	50.0	46.8		ug/L ug/L		94	61 - 137	
Chlorobenzene	50.0	53.5		ug/L ug/L		107	70 - 130	
Chloroethane	50.0					107	70 - 130 55 - 141	
		51.6 46.2		ug/L			69 - 130	
Chloroform Chloromethane	50.0			ug/L		92		
cis-1,2-Dichloroethene	50.0	39.6		ug/L		79	58 - 137	
	50.0	45.3		ug/L		91	68 ₋ 130	
cis-1,3-Dichloropropene	50.0	47.1		ug/L		94	69 - 132	
Dibromochloromethane	50.0	56.0		ug/L		112	67 - 135	
Dibromomethane	50.0	46.9		ug/L		94	70 - 130	
Dichlorodifluoromethane	50.0	50.1		ug/L		100	41 - 146	
Ethylbenzene	50.0	53.7		ug/L		107	70 - 130	
Ethylene Dibromide	50.0	55.9		ug/L		112	70 ₋ 130	
Hexachlorobutadiene	50.0	47.8		ug/L		96	53 - 140	
lodomethane	50.0	36.5		ug/L		73	27 - 159	
Isopropyl ether	50.0	44.1		ug/L		88	64 - 132	
Isopropylbenzene	50.0	56.8		ug/L		114	70 - 130	
Methyl Ethyl Ketone	200	190		ug/L		95	61 - 145	
methyl isobutyl ketone	200	173		ug/L		86	69 - 138	
Methyl tert-butyl ether	50.0	44.9		ug/L		90	66 - 130	
Methylene Chloride	50.0	49.4		ug/L		99	66 - 135	
m-Xylene & p-Xylene	50.0	54.1		ug/L		108	70 - 130	
Naphthalene	50.0	50.5		ug/L		101	47 - 149	
n-Butylbenzene	50.0	50.9		ug/L		102	67 - 130	
N-Propylbenzene	50.0	50.6		ug/L		101	70 - 130	
o-Xylene	50.0	55.2		ug/L		110	70 - 130	
p-Cymene	50.0	49.6		ug/L		99	65 ₋ 130	
sec-Butylbenzene	50.0	52.7		ug/L		105	66 - 130	
Styrene	50.0	54.4		ug/L		109	70 - 130	
tert-Butylbenzene	50.0	52.6		ug/L		105	64 - 139	
Tetrachloroethene	50.0	54.3		ug/L		109	65 - 130	
Toluene	50.0	53.1		ug/L		106	70 - 130	
trans-1,2-Dichloroethene	50.0	48.4		ug/L		97	70 - 130	
trans-1,3-Dichloropropene	50.0	50.2		ug/L		100	63 - 130	
Trichloroethene	50.0	49.2		ug/L		98	70 - 130	
Trichlorofluoromethane	50.0	53.6		ug/L		107	65 ₋ 138	
Vinyl acetate	100	95.7		ug/L		96	26 - 160	

Client: Geosyntec Consultants, Inc.

TestAmerica Job ID: 400-122302-1

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-308685/1002

Matrix: Water

Analyte

Vinyl chloride

Analysis Batch: 308685

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Spike LCS LCS %Rec. Added Result Qualifier Limits Unit D %Rec 50.0 85 42.4 ug/L 59 - 136

LCS LCS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 98 78 - 118 97 Dibromofluoromethane 81 - 121 Toluene-d8 (Surr) 106 80 - 120

Analysis Batch: 308685

Lab Sample ID: 400-122450-A-5 MS	Client Sample ID: Matrix Spike
Matrix: Water	Prep Type: Total/NA

Analysis Batch: 308685	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	0.52	U	50.0	50.2		ug/L		100	59 - 137	
1,1,1-Trichloroethane	0.50	U	50.0	47.9		ug/L		96	57 - 142	
1,1,2,2-Tetrachloroethane	0.50	U	50.0	58.0		ug/L		116	66 - 135	
1,1,2-Trichloroethane	0.50	U	50.0	54.0		ug/L		108	66 - 131	
1,1-Dichloroethane	0.50	U	50.0	44.5		ug/L		89	61 - 144	
1,1-Dichloroethene	0.50	U	50.0	51.5		ug/L		103	54 - 147	
1,1-Dichloropropene	0.50	U	50.0	43.4		ug/L		87	65 - 136	
1,2,3-Trichlorobenzene	0.70	U	50.0	48.8		ug/L		98	43 - 145	
1,2,3-Trichloropropane	0.84	U	50.0	58.6		ug/L		117	65 - 133	
1,2,4-Trichlorobenzene	0.82	U	50.0	48.5		ug/L		97	39 - 148	
1,2,4-Trimethylbenzene	0.82	U	50.0	47.8		ug/L		96	50 - 139	
1,2-Dibromo-3-Chloropropane	1.5	U	50.0	49.8		ug/L		100	45 - 135	
1,2-Dichlorobenzene	0.50	Ü	50.0	50.3		ug/L		101	52 - 137	
1,2-Dichloroethane	0.50	U	50.0	43.7		ug/L		87	60 - 141	
1,2-Dichloropropane	0.50	U	50.0	42.9		ug/L		86	66 - 137	
1,3,5-Trimethylbenzene	0.56	U	50.0	51.6		ug/L		103	52 - 135	
1,3-Dichlorobenzene	0.54	U	50.0	50.3		ug/L		101	54 - 135	
1,3-Dichloropropane	0.50	U	50.0	48.7		ug/L		97	66 - 133	
1,4-Dichlorobenzene	0.64	U	50.0	50.3		ug/L		101	53 ₋ 135	
2,2-Dichloropropane	0.50	U	50.0	44.4		ug/L		89	42 - 144	
2-Chlorotoluene	0.57	U	50.0	49.5		ug/L		99	53 - 134	
2-Hexanone	3.1		200	202		ug/L		101	65 - 140	
4-Chlorotoluene	0.56	U	50.0	48.9		ug/L		98	54 - 133	
Acetone	15		200	203		ug/L		94	43 - 160	
Benzene	0.60	1	50.0	47.8		ug/L		94	56 - 142	
Bromobenzene	0.54	U	50.0	51.8		ug/L		104	59 - 136	
Bromochloromethane	0.52	U	50.0	48.3		ug/L		97	64 - 140	
Bromodichloromethane	0.50		50.0	48.1		ug/L		96	59 - 143	
Bromoform	0.71	U	50.0	49.8		ug/L		100	50 - 140	
Bromomethane	0.98	U	50.0	41.5		ug/L		83	10 - 160	
Carbon disulfide	0.50		50.0	47.7		ug/L		95	48 - 152	
Carbon tetrachloride	0.50	U	50.0	45.7		ug/L		91	55 ₋ 145	
Chlorobenzene	0.50	U	50.0	49.8		ug/L		100	64 - 130	
Chloroethane	0.76		50.0	55.7		ug/L		111	50 - 151	
Chloroform	0.60	U	50.0	46.2		ug/L		92	60 - 141	
Chloromethane	0.83	U	50.0	41.0		ug/L		82	49 - 148	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122450-A-5 MS

Matrix: Water Analysis Batch: 308685 **Client Sample ID: Matrix Spike Prep Type: Total/NA**

Analysis Batch: 308685	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
cis-1,2-Dichloroethene	0.50	U	50.0	45.0		ug/L		90	59 - 143	
cis-1,3-Dichloropropene	0.50	U	50.0	45.5		ug/L		91	57 ₋ 140	
Dibromochloromethane	0.50	U	50.0	52.9		ug/L		106	56 ₋ 143	
Dibromomethane	0.59	U	50.0	47.5		ug/L		95	63 - 138	
Dichlorodifluoromethane	0.85	U	50.0	47.8		ug/L		96	16 - 160	
Ethylbenzene	0.50	U	50.0	49.1		ug/L		98	58 - 131	
Ethylene Dibromide	0.50	Ü	50.0	54.7		ug/L		109	64 - 132	
Hexachlorobutadiene	0.90	U	50.0	41.8		ug/L		84	31 - 149	
lodomethane	0.68	U	50.0	39.6		ug/L		79	20 - 160	
Isopropyl ether	0.70	U	50.0	49.4		ug/L		99	60 - 144	
Isopropylbenzene	3.0		50.0	52.9		ug/L		100	56 - 133	
Methyl Ethyl Ketone	2.6	U	200	197		ug/L		99	55 ₋ 150	
methyl isobutyl ketone	1.8	U	200	178		ug/L		89	63 - 146	
Methyl tert-butyl ether	19		50.0	63.2		ug/L		88	59 ₋ 137	
Methylene Chloride	3.0	U	50.0	48.1		ug/L		96	60 - 146	
m-Xylene & p-Xylene	1.6	Ī	50.0	50.0		ug/L		100	57 - 130	
Naphthalene	1.0	U	50.0	52.3		ug/L		105	25 - 160	
n-Butylbenzene	0.76	U	50.0	46.0		ug/L		92	41 - 142	
N-Propylbenzene	2.1		50.0	49.8		ug/L		95	51 - 138	
o-Xylene	0.60	U	50.0	50.5		ug/L		101	61 - 130	
p-Cymene	0.71	U	50.0	45.9		ug/L		92	48 - 139	
sec-Butylbenzene	0.70	U	50.0	49.5		ug/L		99	50 - 138	
Styrene	1.0	U	50.0	49.6		ug/L		99	58 ₋ 131	
tert-Butylbenzene	1.2		50.0	51.0		ug/L		100	54 - 146	
Tetrachloroethene	0.58	U	50.0	49.3		ug/L		99	52 - 133	
Toluene	0.70	U	50.0	51.0		ug/L		102	65 - 130	
trans-1,2-Dichloroethene	0.50	U	50.0	47.1		ug/L		94	61 - 143	
trans-1,3-Dichloropropene	0.50	U	50.0	48.3		ug/L		97	53 - 133	
Trichloroethene	0.50	U	50.0	48.5		ug/L		97	64 - 136	
Trichlorofluoromethane	0.52	U	50.0	57.9		ug/L		116	54 ₋ 156	
Vinyl acetate	2.0	U	100	107		ug/L		107	26 - 160	
Vinyl chloride	0.50	U	50.0	45.7		ug/L		91	46 - 152	

MS MS

Surrogate	%Recovery Qualifier	r Limits
4-Bromofluorobenzene	103	78 - 118
Dibromofluoromethane	98	81 - 121
Toluene-d8 (Surr)	105	80 - 120

Lab Sample ID: 400-122450-A-5 MSD

Matrix: Water

Analysis Batch: 308685

	Client Sample ID: Matrix Spike Do Prep Type: T	•
 	2/5	

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.52	U	50.0	48.0		ug/L		96	59 - 137	4	30
1,1,1-Trichloroethane	0.50	U	50.0	46.7		ug/L		93	57 - 142	3	30
1,1,2,2-Tetrachloroethane	0.50	U	50.0	54.6		ug/L		109	66 - 135	6	30
1,1,2-Trichloroethane	0.50	U	50.0	52.5		ug/L		105	66 - 131	3	30
1,1-Dichloroethane	0.50	U	50.0	43.8		ug/L		88	61 - 144	2	30

TestAmerica Pensacola

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Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122450-A-5 MSD

Matrix: Water

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Analysis Batch: 308685	Camani-	Comple	Calle	MOD	MeD				0/ Daa		DDD
Analyte	•	Sample Qualifier	Spike Added		MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	0.50		50.0	50.7	Qualifier	ug/L		101	54 ₋ 147	2	30
1,1-Dichloropropene	0.50		50.0	42.0		ug/L		84	65 - 136	3	30
1,2,3-Trichlorobenzene	0.70		50.0	42.7		ug/L		85	43 - 145	13	30
1,2,3-Trichloropropane	0.84		50.0	53.6		ug/L		107	65 - 133	9	30
1,2,4-Trichlorobenzene	0.82		50.0	42.4		ug/L		85	39 - 148	14	30
1,2,4-Trimethylbenzene	0.82		50.0	44.6		ug/L		89	50 - 139	7	30
1,2-Dibromo-3-Chloropropane	1.5		50.0	42.5		ug/L		85	45 - 135	16	30
1,2-Dichlorobenzene	0.50		50.0	46.6		ug/L		93	52 - 137	8	30
1,2-Dichloroethane	0.50		50.0	42.7		ug/L		85	60 - 141	2	30
1,2-Dichloropropane	0.50		50.0	41.9		ug/L		84	66 - 137	2	30
1,3,5-Trimethylbenzene	0.56		50.0	47.8		ug/L		96	52 - 135	8	30
1,3-Dichlorobenzene	0.54		50.0	45.9		ug/L		92	54 - 135	9	30
1,3-Dichloropropane	0.50		50.0	46.5		ug/L		93	66 - 133	4	30
1,4-Dichlorobenzene	0.64		50.0	46.3		ug/L		93	53 - 135	8	30
2,2-Dichloropropane	0.50		50.0	43.6		ug/L		87	42 - 144	2	31
2-Chlorotoluene	0.57		50.0	45.4		ug/L		91	53 - 134	8	30
2-Hexanone	3.1		200	178		ug/L		89	65 - 140	13	30
4-Chlorotoluene	0.56		50.0	45.2		ug/L ug/L		90	54 - 133	8	30
Acetone	15		200	174		ug/L ug/L		79	43 - 160	15	30
Benzene	0.60		50.0	46.5		ug/L		92	56 ₋ 142	3	30
Bromobenzene	0.54		50.0	49.7		ug/L ug/L		99	59 - 136	4	30
Bromochloromethane	0.54		50.0	46.7		ug/L ug/L		93	64 ₋ 140	3	30
Bromodichloromethane	0.52		50.0	47.1		ug/L		94	59 - 143	2	30
Bromoform	0.30		50.0	46.6		ug/L ug/L		93	50 ₋ 140	7	30
Bromomethane	0.71		50.0	41.6		ug/L ug/L		83	10 - 160	0	50
Carbon disulfide	0.50		50.0	46.3		ug/L		93	48 - 152	3	30
Carbon tetrachloride	0.50		50.0	44.8		ug/L ug/L		90	55 ₋ 145	2	30
Chlorobenzene	0.50		50.0	46.9		ug/L ug/L		94	64 - 130	6	30
Chloroethane	0.76		50.0	43.4		ug/L		87	50 - 151	25	30
Chloroform	0.60		50.0	45.3		ug/L ug/L		91	60 ₋ 141	2	30
Chloromethane	0.83		50.0	35.9		ug/L		72	49 - 148	13	31
cis-1,2-Dichloroethene	0.50		50.0	43.4				87	59 - 143	4	30
cis-1,3-Dichloropropene	0.50		50.0	43.4		ug/L		88	59 - 143 57 - 140	4	30
Dibromochloromethane	0.50		50.0	50.9		ug/L		102	56 ₋ 143	4	30
Dibromomethane	0.50		50.0	45.5		ug/L ug/L		91	63 - 138	4	30
Dichlorodifluoromethane	0.85		50.0	41.2		-		82	16 - 160	=	
	0.50		50.0	47.0		ug/L			58 ₋ 131	15 4	31
Ethylbenzene Ethylpen Dibromide	0.50			51.2		ug/L		94		7	30
Ethylene Dibromide			50.0 50.0	36.1		ug/L		102 72	64 ₋ 132 31 ₋ 149		36
Hexachlorobutadiene lodomethane	0.90					ug/L				14	
	0.68		50.0	40.6		ug/L		81	20 - 160	2	44
Isopropyl ether	0.70	U	50.0	41.8		ug/L		84	60 - 144	17 -	30
Isopropylbenzene Methyl Ethyl Ketone	3.0	ш	50.0	50.2		ug/L		94	56 ₋ 133	5	30
Methyl Ethyl Ketone	2.6		200	175		ug/L		88	55 ₋ 150	12	30
methyl isobutyl ketone	1.8	U	200	161		ug/L		80	63 ₋ 146	10	30
Methyl tert-butyl ether	19		50.0	61.1		ug/L		84	59 ₋ 137	3	30
Methylene Chloride	3.0		50.0	46.7		ug/L		93	60 - 146	3	32
m-Xylene & p-Xylene	1.6		50.0	47.4		ug/L		95	57 ₋ 130	5	30
Naphthalene	1.0	U	50.0	48.2		ug/L		96	25 - 160	8	30

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122450-A-5 MSD

Matrix: Water

Analysis Batch: 308685

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Analysis Baton. 000000											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
n-Butylbenzene	0.76	U	50.0	40.3		ug/L		81	41 - 142	13	31
N-Propylbenzene	2.1		50.0	46.2		ug/L		88	51 - 138	7	30
o-Xylene	0.60	U	50.0	47.9		ug/L		96	61 - 130	5	30
p-Cymene	0.71	U	50.0	42.0		ug/L		84	48 - 139	9	30
sec-Butylbenzene	0.70	U	50.0	45.9		ug/L		92	50 - 138	8	30
Styrene	1.0	U	50.0	46.9		ug/L		94	58 - 131	6	30
tert-Butylbenzene	1.2		50.0	48.5		ug/L		95	54 - 146	5	30
Tetrachloroethene	0.58	U	50.0	47.8		ug/L		96	52 - 133	3	30
Toluene	0.70	U	50.0	49.1		ug/L		98	65 - 130	4	30
trans-1,2-Dichloroethene	0.50	U	50.0	46.4		ug/L		93	61 - 143	2	30
trans-1,3-Dichloropropene	0.50	U	50.0	46.1		ug/L		92	53 - 133	5	30
Trichloroethene	0.50	U	50.0	46.3		ug/L		93	64 - 136	5	30
Trichlorofluoromethane	0.52	U	50.0	50.1		ug/L		100	54 - 156	14	30
Vinyl acetate	2.0	U	100	87.3		ug/L		87	26 - 160	20	33
Vinyl chloride	0.50	U	50.0	39.5		ug/L		79	46 - 152	14	30

MSD MSD

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene	102	78 - 118
Dibromofluoromethane	96	81 - 121
Toluene-d8 (Surr)	104	80 - 120

Lab Sample ID: MB 400-308687/4

Matrix: Water

Analysis Batch: 308687

Client Sample ID: Method Blank Prep Type: Total/NA

•	MB	MB							
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			06/06/16 09:17	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/06/16 09:17	1
1,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/06/16 09:17	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/06/16 09:17	1
1,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/06/16 09:17	1
1,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/06/16 09:17	1
1,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/06/16 09:17	1
1,2-Dichlorobenzene	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	ug/L			06/06/16 09:17	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54	ug/L			06/06/16 09:17	1
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
1,4-Dichlorobenzene	0.64	U	1.0	0.64	ug/L			06/06/16 09:17	1
2,2-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
2-Chlorotoluene	0.57	U	1.0	0.57	ug/L			06/06/16 09:17	1
2-Hexanone	3.1	U	25	3.1	ug/L			06/06/16 09:17	1

TestAmerica Pensacola

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Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Method Blank Prep Type: Total/NA

Lab Sample ID: MB 400-308687/4

Matrix: Water

	MB	MB							
Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	0.56	U	1.0	0.56	ug/L			06/06/16 09:17	1
Acetone	10	U	25		ug/L			06/06/16 09:17	1
Benzene	0.38	U	1.0	0.38	ug/L			06/06/16 09:17	1
Bromobenzene	0.54	U	1.0	0.54	ug/L			06/06/16 09:17	1
Bromochloromethane	0.52	U	1.0	0.52	ug/L			06/06/16 09:17	1
Bromodichloromethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
Bromoform	0.71	U	5.0	0.71	ug/L			06/06/16 09:17	1
Bromomethane	0.98	U	1.0	0.98	ug/L			06/06/16 09:17	1
Carbon disulfide	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
Carbon tetrachloride	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
Chlorobenzene	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
Chloroethane	0.76	U	1.0	0.76	ug/L			06/06/16 09:17	1
Chloroform	0.60	U	1.0	0.60	ug/L			06/06/16 09:17	1
Chloromethane	0.83	U	1.0	0.83	ug/L			06/06/16 09:17	1
cis-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
cis-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/06/16 09:17	1
Dibromochloromethane	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
Dibromomethane	0.59	U	5.0	0.59	ug/L			06/06/16 09:17	1
Dichlorodifluoromethane	0.85	U	1.0		ug/L			06/06/16 09:17	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
Ethylene Dibromide	0.50	U	1.0	0.50	ug/L			06/06/16 09:17	1
Hexachlorobutadiene	0.90	U	5.0		ug/L			06/06/16 09:17	1
lodomethane	0.68	U	1.0		ug/L			06/06/16 09:17	1
Isopropyl ether	0.70	U	1.0		ug/L			06/06/16 09:17	1
Isopropylbenzene	0.53	U	1.0		ug/L			06/06/16 09:17	1
Methyl Ethyl Ketone	2.6	U	25		ug/L			06/06/16 09:17	1
methyl isobutyl ketone	1.8	U	25		ug/L			06/06/16 09:17	1
Methyl tert-butyl ether	0.74	U	1.0		ug/L			06/06/16 09:17	1
Methylene Chloride	3.0	U	5.0		ug/L			06/06/16 09:17	1
m-Xylene & p-Xylene	1.6	U	5.0		ug/L			06/06/16 09:17	1
Naphthalene	1.0	U	1.0		ug/L			06/06/16 09:17	1
n-Butylbenzene	0.76	U	1.0		ug/L			06/06/16 09:17	1
N-Propylbenzene	0.69	U	1.0		ug/L			06/06/16 09:17	1
o-Xylene	0.60	U	5.0		ug/L			06/06/16 09:17	1
p-Cymene	0.71	U	1.0		ug/L			06/06/16 09:17	1
sec-Butylbenzene	0.70		1.0		ug/L			06/06/16 09:17	1
Styrene	1.0		1.0		ug/L			06/06/16 09:17	1
tert-Butylbenzene	0.63		1.0		ug/L			06/06/16 09:17	1
Tetrachloroethene	0.58		1.0		ug/L			06/06/16 09:17	1
Toluene	0.70		1.0		ug/L			06/06/16 09:17	1
trans-1,2-Dichloroethene	0.50		1.0		ug/L			06/06/16 09:17	1
trans-1,3-Dichloropropene	0.50		5.0		ug/L			06/06/16 09:17	1
Trichloroethene	0.50		1.0		ug/L			06/06/16 09:17	1
Trichlorofluoromethane	0.52		1.0		ug/L			06/06/16 09:17	1
Vinyl acetate	2.0		25		ug/L			06/06/16 09:17	· · · · · · · · · · · · · · · · · · ·
Vinyl chloride	0.50		1.0		ug/L			06/06/16 09:17	1

TestAmerica Pensacola

9

4

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8

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12

13

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Method Blank

Analyzed

06/06/16 09:17

Lab Sample ID: MB 400-308687/4

Matrix: Water

Chlorobenzene

Chloromethane

cis-1.2-Dichloroethene

cis-1,3-Dichloropropene

Dibromochloromethane

Chloroethane

Chloroform

Analysis Batch: 308687

Prep Type: Total/NA

MB MB Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 94 78 - 118 Dibromofluoromethane 105 81 - 121 Toluene-d8 (Surr) 80 - 120 95

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

06/06/16 09:17 06/06/16 09:17

Prepared

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Water

Lab Sample ID: LCS 400-308687/1002

Analysis Batch: 308687 Spike LCS LCS %Rec. Added Result Qualifier **Analyte** Unit %Rec Limits 1,1,1,2-Tetrachloroethane 50.0 45.8 ug/L 92 67 - 131 1.1.1-Trichloroethane 50.0 49.4 ug/L 99 68 - 1301,1,2,2-Tetrachloroethane 50.0 38.9 ug/L 78 70 - 131 1.1.2-Trichloroethane 50.0 42.7 ug/L 85 70 - 130 1,1-Dichloroethane 50.0 47.1 ug/L 94 70 - 130 88 1,1-Dichloroethene 50.0 44.1 ug/L 63 - 13450.0 45.9 92 70 - 130 1,1-Dichloropropene ug/L 1,2,3-Trichlorobenzene 50.0 44.7 ug/L 89 60 - 1381,2,3-Trichloropropane 50.0 38.8 ug/L 78 70 - 130 1,2,4-Trichlorobenzene 50.0 44.6 ug/L 89 60 - 140 1,2,4-Trimethylbenzene 50.0 42.4 ug/L 85 70 - 130 1,2-Dibromo-3-Chloropropane 50.0 37.9 76 54 - 135 ug/L 50.0 84 1,2-Dichlorobenzene 42.1 ug/L 67 - 1301,2-Dichloroethane 50.0 48.9 ug/L 98 69 - 130 70 - 130 50.0 45.3 91 1,2-Dichloropropane ug/L 1,3,5-Trimethylbenzene 50.0 43.6 ug/L 87 69 - 130 1,3-Dichlorobenzene 50.0 42.5 ug/L 85 70 - 130 1,3-Dichloropropane 50.0 42.4 ug/L 85 70 - 130 1,4-Dichlorobenzene 50.0 42.0 84 70 - 130 ug/L 97 2,2-Dichloropropane 50.0 52 - 135 48.4 ug/L 81 2-Chlorotoluene 50.0 40.4 ug/L 70 - 130 200 2-Hexanone 191 ug/L 95 65 - 1374-Chlorotoluene 50.0 41.5 ug/L 83 70 - 13043 - 160 Acetone 200 299 ug/L 150 Benzene 50.0 44.3 ug/L 89 70 - 130 Bromobenzene 50.0 42.4 ug/L 85 70 - 132 Bromochloromethane 50.0 49.5 ug/L 99 70 - 130 Bromodichloromethane 50.0 48.5 97 67 - 133ug/L Bromoform 50.0 43.6 ug/L 87 57 - 140 Bromomethane 50.0 62.8 ug/L 126 10 - 160 Carbon disulfide 50.0 46.8 ug/L 94 61 - 137 Carbon tetrachloride 50.0 52.1 ug/L 104 61 - 137

TestAmerica Pensacola

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50.0

50.0

50.0

50.0

50.0

50.0

50.0

43.1

53.0

45.7

42.7

47.3

48.4

45.1

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

86

106

91

85

95

97

90

70 - 130

55 - 141

69 - 130

58 - 137

68 - 130

69 - 132

67 - 135

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Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-308687/1002

Matrix: Water

Analysis Batch: 308687

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	Spike	LCS	LCS		%Rec.	
Analyte	Added	Result	Qualifier Unit	D %Rec	Limits	
Dibromomethane	50.0	48.7	ug/L	97	70 - 130	
Dichlorodifluoromethane	50.0	43.3	ug/L	87	41 - 146	
Ethylbenzene	50.0	43.5	ug/L	87	70 - 130	
Ethylene Dibromide	50.0	42.9	ug/L	86	70 - 130	
Hexachlorobutadiene	50.0	44.5	ug/L	89	53 - 140	
lodomethane	50.0	56.2	ug/L	112	27 - 159	
Isopropyl ether	50.0	49.7	ug/L	99	64 - 132	
Isopropylbenzene	50.0	44.3	ug/L	89	70 - 130	
Methyl Ethyl Ketone	200	207	ug/L	104	61 - 145	
methyl isobutyl ketone	200	196	ug/L	98	69 - 138	
Methyl tert-butyl ether	50.0	37.3	ug/L	75	66 - 130	
Methylene Chloride	50.0	45.3	ug/L	91	66 - 135	
m-Xylene & p-Xylene	50.0	43.3	ug/L	87	70 - 130	
Naphthalene	50.0	41.8	ug/L	84	47 - 149	
n-Butylbenzene	50.0	42.1	ug/L	84	67 - 130	
N-Propylbenzene	50.0	41.2	ug/L	82	70 - 130	
o-Xylene	50.0	43.9	ug/L	88	70 - 130	
p-Cymene	50.0	42.7	ug/L	85	65 - 130	
sec-Butylbenzene	50.0	40.8	ug/L	82	66 - 130	
Styrene	50.0	45.0	ug/L	90	70 - 130	
tert-Butylbenzene	50.0	41.3	ug/L	83	64 - 139	
Tetrachloroethene	50.0	42.5	ug/L	85	65 - 130	
Toluene	50.0	42.3	ug/L	85	70 - 130	
trans-1,2-Dichloroethene	50.0	44.4	ug/L	89	70 - 130	
trans-1,3-Dichloropropene	50.0	46.0	ug/L	92	63 - 130	
Trichloroethene	50.0	45.4	ug/L	91	70 - 130	
Trichlorofluoromethane	50.0	49.4	ug/L	99	65 - 138	
Vinyl acetate	100	107	ug/L	107	26 - 160	
Vinyl chloride	50.0	44.8	ug/L	90	59 ₋ 136	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene	95	78 - 118
Dibromofluoromethane	101	81 - 121
Toluene-d8 (Surr)	95	80 - 120

Lab Sample ID: 400-122488-A-12 MS

Matrix: Water

Analysis Batch: 308687

•	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	0.52	U	50.0	50.8		ug/L		102	59 - 137	
1,1,1-Trichloroethane	0.50	U	50.0	52.9		ug/L		106	57 ₋ 142	
1,1,2,2-Tetrachloroethane	0.50	U	50.0	40.1		ug/L		80	66 - 135	
1,1,2-Trichloroethane	0.50	U	50.0	44.8		ug/L		90	66 - 131	
1,1-Dichloroethane	0.50	U	50.0	52.2		ug/L		104	61 - 144	
1,1-Dichloroethene	0.50	U	50.0	47.6		ug/L		95	54 - 147	
1,1-Dichloropropene	0.50	U	50.0	49.6		ug/L		99	65 - 136	
1,2,3-Trichlorobenzene	0.70	U	50.0	48.0		ug/L		96	43 - 145	

TestAmerica Pensacola

Client Sample ID: Matrix Spike

Prep Type: Total/NA

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Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Matrix Spike **Prep Type: Total/NA**

Lab Sample ID: 400-122488-A-12 MS

Matrix: Water

Analysis Batch: 308687	Sample	Sample	Spike	MS	MS			%Rec.	
Analyte		Qualifier	Added		Qualifier	Unit	D %Rec	Limits	
1,2,3-Trichloropropane	0.84		50.0	43.0		ug/L		65 - 133	
1,2,4-Trichlorobenzene	0.82	U	50.0	48.3		ug/L	97	39 - 148	
1,2,4-Trimethylbenzene	0.82		50.0	45.6		ug/L	91	50 ₋ 139	
1,2-Dibromo-3-Chloropropane	1.5	U	50.0	40.8		ug/L	82	45 - 135	
1,2-Dichlorobenzene	0.50		50.0	45.1		ug/L	90	52 ₋ 137	
1,2-Dichloroethane	0.50		50.0	52.1		ug/L	104	60 - 141	
1,2-Dichloropropane	0.50		50.0	49.4		ug/L	99	66 - 137	
1,3,5-Trimethylbenzene	0.56		50.0	45.8		ug/L	92	52 - 135	
1,3-Dichlorobenzene	0.54		50.0	45.2		ug/L	90	54 - 135	
1,3-Dichloropropane	0.50		50.0	46.1		ug/L	92	66 - 133	
1,4-Dichlorobenzene	0.64		50.0	45.0		ug/L	90	53 - 135	
2,2-Dichloropropane	0.50		50.0	57.2		ug/L	114	42 - 144	
2-Chlorotoluene	0.57		50.0	43.5		ug/L	87	53 - 134	
2-Hexanone	3.1		200	179		ug/L	89	65 - 140	
4-Chlorotoluene	0.56		50.0	44.5		ug/L	89	54 ₋ 133	
Acetone	36	O	200	216		ug/L	90	43 - 160	
Benzene	0.38		50.0	48.8		ug/L ug/L	98	56 ₋ 142	
Bromobenzene	0.54		50.0	45.8		ug/L	92	59 ₋ 136	
Bromochloromethane	0.52		50.0	54.6		ug/L	109	64 - 140	
Bromodichloromethane	0.52		50.0	51.5		ug/L ug/L	103	59 ₋ 143	
Bromoform	0.30		50.0	45.2			90	59 - 143 50 - 140	
Bromomethane	0.71		50.0	83.1	12	ug/L ug/L	166	10 - 160	
Carbon disulfide	0.50		50.0	50.9			100	48 - 152	
Carbon tetrachloride	0.50		50.0	55.9		ug/L	112	55 ₋ 145	
Chlorobenzene	0.50		50.0	46.1		ug/L	92	64 ₋ 130	
Chloroethane	0.30		50.0	58.5		ug/L	117	50 - 151	
Chloroform	0.60		50.0	50.8		ug/L	102	60 ₋ 141	
Chloromethane	0.83		50.0	42.2		ug/L	84	49 - 148	
cis-1,2-Dichloroethene	0.50		50.0	52.1		ug/L		49 - 146 59 - 143	
•	0.50		50.0	53.1		ug/L	104 106	59 - 143 57 - 140	
cis-1,3-Dichloropropene Dibromochloromethane			50.0			ug/L			
Dibromomethane	0.50 0.59		50.0	47.5 50.8		ug/L	95	56 - 143 63 - 138	
Dichlorodifluoromethane	0.85		50.0	45.1		ug/L	102 90	16 - 160	
						ug/L			
Ethylbenzene Ethylene Dibromide	0.50 0.50		50.0 50.0	47.4 45.7		ug/L	95 91	58 ₋ 131 64 ₋ 132	
•						ug/L			
Hexachlorobutadiene	0.90		50.0	47.7		ug/L	95	31 - 149	
lodomethane	0.68		50.0	61.7		ug/L	123	20 - 160	
Isopropyl ether	0.70		50.0	44.2		ug/L	88	60 ₋ 144	
Isopropylbenzene	0.53		50.0	48.2		ug/L	96	56 ₋ 133	
Methyl Ethyl Ketone	2.6		200	198		ug/L	99	55 - 150	
methyl isobutyl ketone	1.8		200	206		ug/L	103	63 - 146	
Methyl tert-butyl ether	0.74		50.0	46.1		ug/L	92	59 ₋ 137	
Methylene Chloride	3.0		50.0	49.7		ug/L	99	60 - 146	
m-Xylene & p-Xylene	1.6		50.0	47.5		ug/L	95	57 ₋ 130	
Naphthalene	1.0		50.0	44.7		ug/L	89	25 - 160	
n-Butylbenzene	0.76		50.0	44.1		ug/L	88	41 - 142	
N-Propylbenzene	0.69		50.0	44.7		ug/L	89	51 - 138	
o-Xylene	0.60	U	50.0	47.9		ug/L	96	61 - 130	

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122488-A-12 MS

Matrix: Water

Analysis Batch: 308687

Client Sample ID: Matrix Spike Prep Type: Total/NA

Allalysis Datell. 500001										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
p-Cymene	0.71	U	50.0	46.3		ug/L		93	48 - 139	
sec-Butylbenzene	0.70	U	50.0	44.5		ug/L		89	50 - 138	
Styrene	1.0	U	50.0	48.1		ug/L		96	58 ₋ 131	
tert-Butylbenzene	0.63	U	50.0	44.5		ug/L		89	54 - 146	
Tetrachloroethene	7.0		50.0	54.1		ug/L		94	52 - 133	
Toluene	0.80	1	50.0	46.5		ug/L		91	65 - 130	
trans-1,2-Dichloroethene	0.50	U	50.0	49.5		ug/L		99	61 - 143	
trans-1,3-Dichloropropene	0.50	U	50.0	50.2		ug/L		100	53 - 133	
Trichloroethene	0.50	U	50.0	50.0		ug/L		100	64 - 136	
Trichlorofluoromethane	0.52	U	50.0	50.2		ug/L		100	54 ₋ 156	
Vinyl acetate	2.0	U	100	107		ug/L		107	26 - 160	
Vinyl chloride	0.50	U	50.0	47.9		ug/L		96	46 - 152	
•						-				

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene	96	78 - 118
Dibromofluoromethane	103	81 - 121
Toluene-d8 (Surr)	95	80 - 120

Lab Sample ID: 400-122488-A-12 MSD

Matrix: Water

Analysis Batch: 308687

Client Sample I	D:	Matrix	S	pike	Du	plica	te
		Pren	ī	vpe	: To	tal/N	IA

-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.52	U	50.0	42.9		ug/L		86	59 - 137	17	30
1,1,1-Trichloroethane	0.50	U	50.0	47.3		ug/L		95	57 - 142	11	30
1,1,2,2-Tetrachloroethane	0.50	U	50.0	38.6		ug/L		77	66 - 135	4	30
1,1,2-Trichloroethane	0.50	U	50.0	39.7		ug/L		79	66 - 131	12	30
1,1-Dichloroethane	0.50	U	50.0	46.1		ug/L		92	61 - 144	12	30
1,1-Dichloroethene	0.50	U	50.0	43.6		ug/L		87	54 - 147	9	30
1,1-Dichloropropene	0.50	U	50.0	44.3		ug/L		89	65 - 136	11	30
1,2,3-Trichlorobenzene	0.70	U	50.0	40.9		ug/L		82	43 - 145	16	30
1,2,3-Trichloropropane	0.84	U	50.0	39.7		ug/L		79	65 - 133	8	30
1,2,4-Trichlorobenzene	0.82	U	50.0	39.2		ug/L		78	39 - 148	21	30
1,2,4-Trimethylbenzene	0.82	U	50.0	37.8		ug/L		76	50 - 139	19	30
1,2-Dibromo-3-Chloropropane	1.5	U	50.0	40.5		ug/L		81	45 - 135	1	30
1,2-Dichlorobenzene	0.50	U	50.0	38.2		ug/L		76	52 - 137	17	30
1,2-Dichloroethane	0.50	U	50.0	47.1		ug/L		94	60 - 141	10	30
1,2-Dichloropropane	0.50	U	50.0	43.8		ug/L		88	66 - 137	12	30
1,3,5-Trimethylbenzene	0.56	U	50.0	37.3		ug/L		75	52 - 135	20	30
1,3-Dichlorobenzene	0.54	U	50.0	37.5		ug/L		75	54 - 135	19	30
1,3-Dichloropropane	0.50	U	50.0	41.2		ug/L		82	66 - 133	11	30
1,4-Dichlorobenzene	0.64	U	50.0	37.2		ug/L		74	53 - 135	19	30
2,2-Dichloropropane	0.50	U	50.0	51.7		ug/L		103	42 - 144	10	31
2-Chlorotoluene	0.57	U	50.0	36.8		ug/L		74	53 - 134	17	30
2-Hexanone	3.1	U	200	173		ug/L		87	65 - 140	3	30
4-Chlorotoluene	0.56	U	50.0	37.0		ug/L		74	54 - 133	18	30
Acetone	36		200	218		ug/L		91	43 - 160	1	30
Benzene	0.38	U	50.0	43.1		ug/L		86	56 - 142	12	30

TestAmerica Pensacola

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Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122488-A-12 MSD

Matrix: Water

Analysis Batch: 308687

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Bromobenzene	0.54	U	50.0	38.8		ug/L		78	59 - 136	17	30
Bromochloromethane	0.52	U	50.0	50.0		ug/L		100	64 - 140	9	30
Bromodichloromethane	0.50	U	50.0	46.4		ug/L		93	59 - 143	10	30
Bromoform	0.71	U	50.0	42.0		ug/L		84	50 - 140	8	30
Bromomethane	0.98	U	50.0	83.4	J3	ug/L		167	10 - 160	0	50
Carbon disulfide	0.50	U	50.0	45.5		ug/L		91	48 - 152	11	30
Carbon tetrachloride	0.50	U	50.0	50.2		ug/L		100	55 - 145	11	30
Chlorobenzene	0.50	U	50.0	39.2		ug/L		78	64 - 130	16	30
Chloroethane	0.76	U	50.0	55.2		ug/L		110	50 - 151	6	30
Chloroform	0.60	U	50.0	45.1		ug/L		90	60 - 141	12	30
Chloromethane	0.83	U	50.0	39.4		ug/L		79	49 - 148	7	31
cis-1,2-Dichloroethene	0.50	U	50.0	46.2		ug/L		92	59 - 143	12	30
cis-1,3-Dichloropropene	0.50	U	50.0	46.9		ug/L		94	57 - 140	12	30
Dibromochloromethane	0.50	U	50.0	42.4		ug/L		85	56 - 143	11	30
Dibromomethane	0.59	U	50.0	46.7		ug/L		93	63 - 138	8	30
Dichlorodifluoromethane	0.85	U	50.0	42.1		ug/L		84	16 - 160	7	31
Ethylbenzene	0.50	U	50.0	39.6		ug/L		79	58 - 131	18	30
Ethylene Dibromide	0.50	U	50.0	41.2		ug/L		82	64 - 132	10	30
Hexachlorobutadiene	0.90	U	50.0	38.4		ug/L		77	31 - 149	22	36
lodomethane	0.68	U	50.0	58.4		ug/L		117	20 - 160	5	44
Isopropyl ether	0.70	U	50.0	44.4		ug/L		89	60 - 144	0	30
Isopropylbenzene	0.53	U	50.0	39.8		ug/L		80	56 - 133	19	30
Methyl Ethyl Ketone	2.6	U	200	196		ug/L		98	55 - 150	1	30
methyl isobutyl ketone	1.8	U	200	202		ug/L		101	63 - 146	2	30
Methyl tert-butyl ether	0.74	U	50.0	43.9		ug/L		88	59 - 137	5	30
Methylene Chloride	3.0	U	50.0	45.0		ug/L		90	60 - 146	10	32
m-Xylene & p-Xylene	1.6		50.0	39.9		ug/L		80	57 - 130	17	30
Naphthalene	1.0		50.0	41.2		ug/L		82	25 - 160	8	30
n-Butylbenzene	0.76		50.0	35.9		ug/L		72	41 - 142	20	31
N-Propylbenzene	0.69	U	50.0	36.5		ug/L		73	51 - 138	20	30
o-Xylene	0.60	U	50.0	40.2		ug/L		80	61 - 130	18	30
p-Cymene	0.71		50.0	37.4		ug/L		75	48 - 139	21	30
sec-Butylbenzene	0.70	U	50.0	36.5		ug/L		73	50 - 138	20	30
Styrene	1.0		50.0	40.1		ug/L		80	58 - 131	18	30
tert-Butylbenzene	0.63	U	50.0	36.3		ug/L		73	54 - 146	20	30
Tetrachloroethene	7.0		50.0	47.5		ug/L		81	52 - 133	13	30
Toluene	0.80		50.0	39.6		ug/L		78	65 - 130	16	30
trans-1,2-Dichloroethene	0.50		50.0	44.8		ug/L		90	61 - 143	10	30
trans-1,3-Dichloropropene	0.50		50.0	44.2		ug/L		88	53 - 133	13	30
Trichloroethene	0.50		50.0	43.5		ug/L		87	64 - 136	14	30
Trichlorofluoromethane	0.52		50.0	47.6		ug/L		95	54 - 156	5	30
Vinyl acetate	2.0		100	108		ug/L		108	26 - 160	2	33
Vinyl chloride	0.50	U	50.0	44.3		ug/L		89	46 - 152	8	30
		MeD									

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	96		78 - 118
Dibromofluoromethane	104		81 - 121
Toluene-d8 (Surr)	93		80 120

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Client Sample ID: Method Blank

Prep Type: Total/NA

Lab Sample ID: MB 400-308873/13

Matrix: Water Analysis Batch: 308873

		MB							
Analyte		Qualifier	PQL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.52	U	1.0	0.52	-			06/07/16 14:08	1
1,1,1-Trichloroethane	0.50	U	1.0	0.50	-			06/07/16 14:08	1
1,1,2,2-Tetrachloroethane	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
1,1,2-Trichloroethane	0.50	U	5.0	0.50	ug/L			06/07/16 14:08	1
I,1-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
I,1-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
1,1-Dichloropropene	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
1,2,3-Trichlorobenzene	0.70	U	1.0	0.70	ug/L			06/07/16 14:08	1
1,2,3-Trichloropropane	0.84	U	5.0	0.84	ug/L			06/07/16 14:08	1
,2,4-Trichlorobenzene	0.82	U	1.0	0.82	ug/L			06/07/16 14:08	1
,2,4-Trimethylbenzene	0.82	U	1.0	0.82	ug/L			06/07/16 14:08	1
,2-Dibromo-3-Chloropropane	1.5	U	5.0	1.5	ug/L			06/07/16 14:08	1
1,2-Dichlorobenzene	0.50	Ü	1.0	0.50	ug/L			06/07/16 14:08	1
1,2-Dichloroethane	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
1,2-Dichloropropane	0.50	U	1.0	0.50	-			06/07/16 14:08	1
1,3,5-Trimethylbenzene	0.56	U	1.0	0.56	-			06/07/16 14:08	1
1,3-Dichlorobenzene	0.54	U	1.0	0.54				06/07/16 14:08	1
1,3-Dichloropropane	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
I,4-Dichlorobenzene	0.64	U	1.0	0.64	-			06/07/16 14:08	1
2,2-Dichloropropane	0.50	U	1.0	0.50				06/07/16 14:08	1
2-Chlorotoluene	0.57	U	1.0	0.57	-			06/07/16 14:08	1
2-Hexanone	3.1	U	25		ug/L			06/07/16 14:08	1
-Chlorotoluene	0.56	U	1.0	0.56	-			06/07/16 14:08	1
cetone	10	U	25		ug/L			06/07/16 14:08	1
Benzene	0.38	Ü	1.0	0.38	-			06/07/16 14:08	1
Bromobenzene	0.54		1.0	0.54	_			06/07/16 14:08	1
Bromochloromethane	0.52		1.0	0.52	_			06/07/16 14:08	1
Bromodichloromethane	0.50		1.0	0.50	-			06/07/16 14:08	1
Bromoform	0.71		5.0	0.71	-			06/07/16 14:08	1
Bromomethane	0.98		1.0	0.98	_			06/07/16 14:08	1
Carbon disulfide	0.50		1.0	0.50	-			06/07/16 14:08	1
Carbon tetrachloride	0.50		1.0	0.50	-			06/07/16 14:08	1
Chlorobenzene	0.50		1.0	0.50	-			06/07/16 14:08	1
Chloroethane	0.76		1.0	0.76	-			06/07/16 14:08	1
Chloroform	0.60		1.0	0.60	-			06/07/16 14:08	1
Chloromethane	0.83		1.0	0.83	-			06/07/16 14:08	1
sis-1,2-Dichloroethene	0.50		1.0	0.50				06/07/16 14:08	· · · · · · · · · · · · · · · · · · ·
is-1,3-Dichloropropene	0.50		5.0	0.50				06/07/16 14:08	1
Dibromochloromethane	0.50		1.0	0.50				06/07/16 14:08	1
Dibromomethane	0.59		5.0	0.59	-			06/07/16 14:08	· · · · · · · · · · · · · · · · · · ·
Dichlorodifluoromethane	0.85		1.0	0.85				06/07/16 14:08	1
Ethylbenzene	0.50		1.0		ug/L			06/07/16 14:08	1
thylene Dibromide	0.50		1.0					06/07/16 14:08	· · · · · · · · · · · · · · · · · · ·
Hexachlorobutadiene	0.90		5.0	0.50	ug/L ug/L			06/07/16 14:08	1
odomethane	0.90		1.0		ug/L ug/L			06/07/16 14:08	1
	0.68				-			06/07/16 14:08	
sopropyl ether	0.70		1.0 1.0		ug/L				1
sopropylbenzene				0.53				06/07/16 14:08	1
Methyl Ethyl Ketone	2.6		25		ug/L			06/07/16 14:08	1
methyl isobutyl ketone Methyl tert-butyl ether	1.8 0.74		25 1.0		ug/L ug/L			06/07/16 14:08 06/07/16 14:08	1

Client: Geosyntec Consultants, Inc.

Lab Sample ID: MB 400-308873/13

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Method Blank

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Matrix: Water Analysis Batch: 308873

	MB	MR							
Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	3.0	U	5.0	3.0	ug/L			06/07/16 14:08	1
m-Xylene & p-Xylene	1.6	U	5.0	1.6	ug/L			06/07/16 14:08	1
Naphthalene	1.0	U	1.0	1.0	ug/L			06/07/16 14:08	1
n-Butylbenzene	0.76	U	1.0	0.76	ug/L			06/07/16 14:08	1
N-Propylbenzene	0.69	U	1.0	0.69	ug/L			06/07/16 14:08	1
o-Xylene	0.60	U	5.0	0.60	ug/L			06/07/16 14:08	1
p-Cymene	0.71	U	1.0	0.71	ug/L			06/07/16 14:08	1
sec-Butylbenzene	0.70	U	1.0	0.70	ug/L			06/07/16 14:08	1
Styrene	1.0	U	1.0	1.0	ug/L			06/07/16 14:08	1
tert-Butylbenzene	0.63	U	1.0	0.63	ug/L			06/07/16 14:08	1
Tetrachloroethene	0.58	U	1.0	0.58	ug/L			06/07/16 14:08	1
Toluene	0.70	U	1.0	0.70	ug/L			06/07/16 14:08	1
trans-1,2-Dichloroethene	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
trans-1,3-Dichloropropene	0.50	U	5.0	0.50	ug/L			06/07/16 14:08	1
Trichloroethene	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1
Trichlorofluoromethane	0.52	U	1.0	0.52	ug/L			06/07/16 14:08	1
Vinyl acetate	2.0	U	25	2.0	ug/L			06/07/16 14:08	1
Vinyl chloride	0.50	U	1.0	0.50	ug/L			06/07/16 14:08	1

MB MB %Recovery Qualifier Dil Fac Surrogate Limits Prepared Analyzed 4-Bromofluorobenzene 93 78 - 118 06/07/16 14:08 Dibromofluoromethane 105 81 - 121 06/07/16 14:08 Toluene-d8 (Surr) 92 80 - 120 06/07/16 14:08

Lab Sample ID: LCS 400-308873/1002

Matrix: Water

Analysis Batch: 308873

Analysis Batch: 308873								
-	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	50.0	35.7		ug/L		71	67 - 131	
1,1,1-Trichloroethane	50.0	55.1		ug/L		110	68 - 130	
1,1,2,2-Tetrachloroethane	50.0	54.0		ug/L		108	70 - 131	
1,1,2-Trichloroethane	50.0	52.7		ug/L		105	70 - 130	
1,1-Dichloroethane	50.0	50.6		ug/L		101	70 - 130	
1,1-Dichloroethene	50.0	59.2		ug/L		118	63 - 134	
1,1-Dichloropropene	50.0	49.7		ug/L		99	70 - 130	
1,2,3-Trichlorobenzene	50.0	50.6		ug/L		101	60 - 138	
1,2,3-Trichloropropane	50.0	53.3		ug/L		107	70 - 130	
1,2,4-Trichlorobenzene	50.0	52.8		ug/L		106	60 - 140	
1,2,4-Trimethylbenzene	50.0	51.0		ug/L		102	70 - 130	
1,2-Dibromo-3-Chloropropane	50.0	50.7		ug/L		101	54 - 135	
1,2-Dichlorobenzene	50.0	52.4		ug/L		105	67 - 130	
1,2-Dichloroethane	50.0	49.9		ug/L		100	69 - 130	
1,2-Dichloropropane	50.0	49.5		ug/L		99	70 - 130	
1,3,5-Trimethylbenzene	50.0	53.7		ug/L		107	69 - 130	
1,3-Dichlorobenzene	50.0	53.2		ug/L		106	70 - 130	
1,3-Dichloropropane	50.0	48.0		ug/L		96	70 - 130	
1,4-Dichlorobenzene	50.0	53.1		ug/L		106	70 - 130	

Client: Geosyntec Consultants, Inc.

TestAmerica Job ID: 400-122302-1 Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-308873/1002

Matrix: Water

Analysis Batch: 308873

Client Sample I	D: Lab Control Sample
	Prep Type: Total/NA

	Spike	LCS	LCS			%Rec.
Analyte	Added	Result	Qualifier	Unit	D %Rec	Limits
2,2-Dichloropropane	50.0	51.3		ug/L		52 - 135
2-Chlorotoluene	50.0	49.5		ug/L	99	70 - 130
2-Hexanone	200	195		ug/L	98	65 - 137
4-Chlorotoluene	50.0	50.6		ug/L	101	70 - 130
Acetone	200	214		ug/L	107	43 - 160
Benzene	50.0	54.2		ug/L	108	70 - 130
Bromobenzene	50.0	52.5		ug/L	105	70 ₋ 132
Bromochloromethane	50.0	55.4		ug/L	111	70 ₋ 130
Bromodichloromethane	50.0	54.8		ug/L	110	67 - 133
Bromoform	50.0	42.8		ug/L	86	57 ₋ 140
Bromomethane	50.0	51.7		ug/L	103	10 - 160
Carbon disulfide	50.0	54.2		ug/L	108	61 - 137
Carbon tetrachloride	50.0	52.7		ug/L	105	61 - 137
Chlorobenzene	50.0	44.9		ug/L	90	70 - 130
Chloroethane	50.0	60.1		ug/L	120	55 ₋ 141
Chloroform	50.0	52.6		ug/L	105	69 - 130
Chloromethane	50.0	48.9		ug/L	98	58 - 137
cis-1,2-Dichloroethene	50.0	51.2		ug/L	102	68 - 130
cis-1,3-Dichloropropene	50.0	53.5		ug/L	107	69 - 132
Dibromochloromethane	50.0	53.8		ug/L	107	67 ₋ 135
Dibromomethane	50.0	53.8		ug/L ug/L	108	70 - 130
Dichlorodifluoromethane	50.0	51.9		ug/L ug/L	104	41 ₋ 146
Ethylbenzene	50.0	42.4		ug/L ug/L	85	70 ₋ 130
Ethylene Dibromide	50.0	54.5			109	70 - 130
Euryiene Dibromide Hexachlorobutadiene	50.0	47.9		ug/L	96	53 ₋ 140
				ug/L		
lodomethane	50.0	40.8		ug/L	82	27 - 159
Isopropyl ether	50.0	54.0		ug/L	108	64 - 132
Isopropylbenzene	50.0	49.3		ug/L	99	70 - 130
Methyl Ethyl Ketone	200	225		ug/L	112	61 - 145
methyl isobutyl ketone	200	206		ug/L	103	69 - 138
Methyl tert-butyl ether	50.0	51.3		ug/L	103	66 - 130
Methylene Chloride	50.0	55.3		ug/L	111	66 - 135
m-Xylene & p-Xylene	50.0	47.9		ug/L	96	70 - 130
Naphthalene	50.0	51.6		ug/L	103	47 - 149
n-Butylbenzene	50.0	51.3		ug/L	103	67 - 130
N-Propylbenzene	50.0	50.3		ug/L	101	70 - 130
o-Xylene	50.0	47.9		ug/L	96	70 - 130
p-Cymene	50.0	49.2		ug/L	98	65 - 130
sec-Butylbenzene	50.0	52.6		ug/L	105	66 - 130
Styrene	50.0	48.7		ug/L	97	70 - 130
tert-Butylbenzene	50.0	51.7		ug/L	103	64 - 139
Tetrachloroethene	50.0	55.8		ug/L	112	65 - 130
Toluene	50.0	50.9		ug/L	102	70 - 130
trans-1,2-Dichloroethene	50.0	55.7		ug/L	111	70 - 130
trans-1,3-Dichloropropene	50.0	48.7		ug/L	97	63 - 130
Trichloroethene	50.0	56.6		ug/L	113	70 - 130
Trichlorofluoromethane	50.0	65.1		ug/L	130	65 - 138
Vinyl acetate	100	116		ug/L	116	26 - 160

QC Sample Results

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-308873/1002

Matrix: Water

Analysis Batch: 308873

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Spike LCS LCS %Rec. Analyte Added Result Qualifier Limits Unit D %Rec Vinyl chloride 50.0 52.1 ug/L 104 59 - 136

LCS LCS Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 94 78 - 118 81 - 121 Dibromofluoromethane 101 Toluene-d8 (Surr) 97 80 - 120

Lab Sample ID: 400-122491-A-2 MS Client Sample ID: Matrix Spike **Prep Type: Total/NA**

Matrix: Water

Analysis Batch: 308873									1 100 1 1 100 1	otan in
Analysis Batch: 000070	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	-	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	0.52	U	50.0	54.2		ug/L		108	59 - 137	
1,1,1-Trichloroethane	0.50	U	50.0	59.4		ug/L		119	57 - 142	
1,1,2,2-Tetrachloroethane	0.50	U	50.0	56.7		ug/L		113	66 - 135	
1,1,2-Trichloroethane	0.50	U	50.0	55.8		ug/L		112	66 - 131	
1,1-Dichloroethane	0.50	U	50.0	54.8		ug/L		110	61 - 144	
1,1-Dichloroethene	0.50	U	50.0	64.0		ug/L		128	54 - 147	
1,1-Dichloropropene	0.50	U	50.0	53.9		ug/L		108	65 - 136	
1,2,3-Trichlorobenzene	0.70	U	50.0	54.0		ug/L		108	43 - 145	
1,2,3-Trichloropropane	0.84	U	50.0	55.9		ug/L		112	65 - 133	
1,2,4-Trichlorobenzene	0.82	U	50.0	56.2		ug/L		112	39 - 148	
1,2,4-Trimethylbenzene	0.82	U	50.0	55.1		ug/L		110	50 - 139	
1,2-Dibromo-3-Chloropropane	1.5	U	50.0	50.1		ug/L		100	45 - 135	
1,2-Dichlorobenzene	0.50	Ü	50.0	55.7		ug/L		111	52 - 137	
1,2-Dichloroethane	0.50	U	50.0	53.2		ug/L		106	60 - 141	
1,2-Dichloropropane	0.50	U	50.0	53.0		ug/L		106	66 - 137	
1,3,5-Trimethylbenzene	0.56	U	50.0	58.1		ug/L		116	52 - 135	
1,3-Dichlorobenzene	0.54	U	50.0	57.0		ug/L		114	54 ₋ 135	
1,3-Dichloropropane	0.50	U	50.0	50.8		ug/L		102	66 - 133	
1,4-Dichlorobenzene	0.64	U	50.0	57.9		ug/L		116	53 - 135	
2,2-Dichloropropane	0.50	U	50.0	55.3		ug/L		111	42 - 144	
2-Chlorotoluene	0.57	U	50.0	54.3		ug/L		109	53 - 134	
2-Hexanone	3.1	Ü	200	186		ug/L		93	65 - 140	
4-Chlorotoluene	0.56	U	50.0	55.1		ug/L		110	54 ₋ 133	
Acetone	10	U	200	189		ug/L		94	43 - 160	
Benzene	0.38	Ü	50.0	58.9		ug/L		118	56 - 142	
Bromobenzene	0.54	U	50.0	56.7		ug/L		113	59 - 136	
Bromochloromethane	0.52	U	50.0	58.8		ug/L		118	64 - 140	
Bromodichloromethane	0.50	U	50.0	59.5		ug/L		119	59 - 143	
Bromoform	0.71	U	50.0	53.3		ug/L		107	50 ₋ 140	
Bromomethane	0.98	U	50.0	51.9		ug/L		104	10 - 160	
Carbon disulfide	0.50	U	50.0	58.4		ug/L		117	48 - 152	
Carbon tetrachloride	0.50	U	50.0	56.6		ug/L		113	55 - 145	
Chlorobenzene	0.50	U	50.0	55.0		ug/L		110	64 - 130	
Chloroethane	0.76	Ü	50.0	64.1		ug/L		128	50 - 151	
Chloroform	0.60	U	50.0	56.9		ug/L		114	60 - 141	
Chloromethane	0.83	U	50.0	48.8		ug/L		98	49 - 148	

TestAmerica Job ID: 400-122302-1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122491-A-2 MS

Matrix: Water

Client Sample ID: Matrix Spike Prep Type: Total/NA

Analysis Batch: 308873	Commis	Camania	Cuilca	ме	MS				9/ D aa
Analyte	•	Sample Qualifier	Spike Added	MS	Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	0.50		50.0 —	54.5	Qualifier	ug/L		109	59 ₋ 143
cis-1,3-Dichloropropene	0.50		50.0	57.5		ug/L		115	57 ₋ 140
Dibromochloromethane	0.50		50.0	57.1		ug/L ug/L		114	56 ₋ 143
Dibromomethane	0.59		50.0	57.0		ug/L		114	63 - 138
Dichlorodifluoromethane	0.85		50.0	57.0		ug/L ug/L		114	16 - 160
Ethylbenzene	0.50		50.0	55.3		ug/L		111	58 - 131
Ethylene Dibromide	0.50		50.0	56.4		ug/L		113	64 - 132
Hexachlorobutadiene	0.90		50.0	51.6		ug/L ug/L		103	31 - 149
Iodomethane	0.68		50.0	57.8		ug/L		116	20 - 160
Isopropyl ether	0.70		50.0	53.9		ug/L		108	60 - 144
Isopropylbenzene	0.70		50.0	58.1		ug/L ug/L		116	56 - 133
Methyl Ethyl Ketone	2.6		200	209		ug/L ug/L		105	55 ₋ 150
methyl isobutyl ketone	1.8		200	203		ug/L		100	63 - 146
Methyl tert-butyl ether	0.74		50.0	53.8		ug/L		108	59 ₋ 137
Methylene Chloride	3.0		50.0	59.2		ug/L ug/L		118	60 - 146
m-Xylene & p-Xylene	1.6		50.0	56.1		ug/L		112	57 - 130
Naphthalene	1.0		50.0	55.0		ug/L ug/L		110	25 ₋ 160
n-Butylbenzene	0.76		50.0	54.6		ug/L ug/L		109	41 - 142
N-Propylbenzene	0.69		50.0	54.6		ug/L		109	51 - 138
o-Xylene	0.60		50.0	56.6		ug/L ug/L		113	61 - 130
p-Cymene	0.71		50.0	52.5		ug/L		105	48 - 139
sec-Butylbenzene	0.70		50.0	56.8		ug/L		114	50 ₋ 138
Styrene	1.0		50.0	55.4		ug/L		111	58 ₋ 131
tert-Butylbenzene	0.63		50.0	56.3		ug/L		113	54 ₋ 146
Tetrachloroethene	0.58		50.0	56.0		ug/L		112	52 - 133
Toluene	0.70		50.0	55.5		ug/L		111	65 - 130
trans-1,2-Dichloroethene	0.70		50.0	59.9		ug/L ug/L		120	61 ₋ 143
trans-1,3-Dichloropropene	0.50		50.0	51.7		ug/L		103	53 - 133
Trichloroethene	0.50		50.0	61.1		ug/L		122	64 ₋ 136
Trichlorofluoromethane	0.50		50.0	66.5		ug/L ug/L		133	54 ₋ 156
Thomoromounding	0.52		50.0			ug/L		100	

100

50.0

118

55.2

MS MS

2.0 U

0.50 U

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene	103	78 - 118
Dibromofluoromethane	102	81 - 121
Toluene-d8 (Surr)	99	80 - 120

Lab Sample ID: 400-122491-A-2 MSD

Matrix: Water

Vinyl acetate

Vinyl chloride

Analysis Batch: 308873

Client Sample ID:	Matrix Spike Duplicate
	Prep Type: Total/NA

118

110

26 - 160

46 - 152

ug/L

ug/L

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.52	U	50.0	54.9		ug/L		110	59 - 137	1	30
1,1,1-Trichloroethane	0.50	U	50.0	59.8		ug/L		120	57 - 142	1	30
1,1,2,2-Tetrachloroethane	0.50	U	50.0	59.8		ug/L		120	66 - 135	5	30
1,1,2-Trichloroethane	0.50	U	50.0	57.0		ug/L		114	66 - 131	2	30
1,1-Dichloroethane	0.50	U	50.0	51.0		ug/L		102	61 - 144	7	30

TestAmerica Pensacola

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QC Sample Results

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-122491-A-2 MSD

Matrix: Water

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Analysis Batch: 308873	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.50		50.0	63.3		ug/L		127	54 ₋ 147	1	30
1,1-Dichloropropene	0.50		50.0	54.5		ug/L		109	65 - 136	1	30
1,2,3-Trichlorobenzene	0.70		50.0	54.7		ug/L		109	43 - 145	1	30
1,2,3-Trichloropropane	0.84	U	50.0	57.8		ug/L		116	65 - 133	3	30
1,2,4-Trichlorobenzene	0.82		50.0	55.7		ug/L		111	39 - 148	1	30
1,2,4-Trimethylbenzene	0.82		50.0	54.4		ug/L		109	50 - 139	1	30
1,2-Dibromo-3-Chloropropane	1.5	U	50.0	56.3		ug/L		113	45 - 135	12	30
1,2-Dichlorobenzene	0.50	U	50.0	55.2		ug/L		110	52 - 137	1	30
1,2-Dichloroethane	0.50	U	50.0	54.0		ug/L		108	60 - 141	2	30
1,2-Dichloropropane	0.50	U	50.0	53.3		ug/L		107	66 - 137	1	30
1,3,5-Trimethylbenzene	0.56	U	50.0	57.1		ug/L		114	52 - 135	2	30
1,3-Dichlorobenzene	0.54		50.0	56.2		ug/L		112	54 ₋ 135	1	30
1,3-Dichloropropane	0.50		50.0	51.5		ug/L		103	66 - 133	1	30
1,4-Dichlorobenzene	0.64		50.0	56.7		ug/L		113	53 - 135	2	30
2,2-Dichloropropane	0.50		50.0	54.3		ug/L		109	42 - 144	2	31
2-Chlorotoluene	0.57		50.0	55.3		ug/L		111	53 - 134	2	30
2-Hexanone	3.1		200	207		ug/L		103	65 - 140	11	30
4-Chlorotoluene	0.56		50.0	54.9		ug/L		110	54 - 133	0	30
Acetone	10		200	205		ug/L		102	43 - 160	8	30
Benzene	0.38		50.0	58.7		ug/L		117	56 - 142	0	30
Bromobenzene	0.54		50.0	56.1		ug/L		112	59 - 136	1	30
Bromochloromethane	0.52		50.0	58.7		ug/L		117	64 - 140	0	30
Bromodichloromethane	0.50		50.0	60.1		ug/L		120	59 - 143	1	30
Bromoform	0.71		50.0	56.5		ug/L		113	50 ₋ 140	6	30
Bromomethane	0.98		50.0	56.5		ug/L		113	10 - 160	9	50
Carbon disulfide	0.50		50.0	57.8		ug/L		116	48 - 152	1	30
Carbon tetrachloride	0.50		50.0	57.3		ug/L		115	55 ₋ 145	1	30
Chlorobenzene	0.50		50.0	55.1		ug/L		110	64 - 130	0	30
Chloroethane	0.76	. U	50.0	62.7		ug/L		125	50 - 151	2	30
Chloroform	0.60		50.0	56.6		ug/L		113	60 - 141	1	30
Chloromethane	0.83		50.0	49.3		ug/L		99	49 - 148	1	31
cis-1,2-Dichloroethene	0.50	Ü	50.0	55.5		ug/L		111	59 - 143	2	30
cis-1,3-Dichloropropene	0.50		50.0	58.3		ug/L		117	57 ₋ 140	1	30
Dibromochloromethane	0.50		50.0	57.6		ug/L		115	56 ₋ 143	1	30
Dibromomethane	0.59	U	50.0	58.2		ug/L		116	63 - 138	2	30
Dichlorodifluoromethane	0.85		50.0	55.9		ug/L		112	16 - 160	2	31
Ethylbenzene	0.50	U	50.0	55.1		ug/L		110	58 ₋ 131	0	30
Ethylene Dibromide	0.50		50.0	59.3		ug/L		119	64 - 132	5	30
Hexachlorobutadiene	0.90		50.0	52.1		ug/L		104	31 - 149	1	36
Iodomethane	0.68		50.0	55.8		ug/L		112	20 - 160	3	44
Isopropyl ether	0.70		50.0	52.9		ug/L		106	60 - 144	2	30
Isopropylbenzene	0.53		50.0	58.0		ug/L		116	56 ₋ 133	0	30
Methyl Ethyl Ketone	2.6		200	235		ug/L		117	55 - 150	11	30
methyl isobutyl ketone	1.8		200	226		ug/L		113	63 - 146	12	30
Methyl tert-butyl ether	0.74		50.0	55.1		ug/L		110	59 ₋ 137	2	30
Methylene Chloride	3.0		50.0	58.9		ug/L		118	60 - 146	1	32
m-Xylene & p-Xylene	1.6		50.0	55.7		ug/L		111	57 - 130	1	30
Naphthalene	1.0		50.0	57.3		ug/L		115	25 - 160	4	30

Client: Geosyntec Consultants, Inc. Project/Site: VAB-LTM

Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

Lab Sample ID: 400-122491-A-2 MSD **Matrix: Water Analysis Batch: 308873**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

-	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
n-Butylbenzene	0.76	U	50.0	53.7		ug/L		107	41 - 142	2	31
N-Propylbenzene	0.69	Ü	50.0	53.9		ug/L		108	51 - 138	1	30
o-Xylene	0.60	U	50.0	56.8		ug/L		114	61 - 130	0	30
p-Cymene	0.71	U	50.0	52.8		ug/L		106	48 - 139	1	30
sec-Butylbenzene	0.70	Ü	50.0	55.9		ug/L		112	50 - 138	2	30
Styrene	1.0	U	50.0	56.1		ug/L		112	58 - 131	1	30
tert-Butylbenzene	0.63	U	50.0	55.5		ug/L		111	54 - 146	2	30
Tetrachloroethene	0.58	U	50.0	55.9		ug/L		112	52 - 133	0	30
Toluene	0.70	U	50.0	55.1		ug/L		110	65 - 130	1	30
trans-1,2-Dichloroethene	0.50	U	50.0	58.8		ug/L		118	61 - 143	2	30
trans-1,3-Dichloropropene	0.50	U	50.0	52.8		ug/L		106	53 - 133	2	30
Trichloroethene	0.50	U	50.0	61.2		ug/L		122	64 - 136	0	30
Trichlorofluoromethane	0.52	U	50.0	66.2		ug/L		132	54 - 156	1	30
Vinyl acetate	2.0	U	100	114		ug/L		114	26 - 160	4	33
Vinyl chloride	0.50	U	50.0	53.4		ug/L		107	46 - 152	3	30

MSD MSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene 102 78 - 118 Dibromofluoromethane 104 81 - 121 99 Toluene-d8 (Surr) 80 - 120

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 400-308303/1-A ^5

Matrix: Water

Analysis Batch: 308895

MB MB

Analyte Result Qualifier PQL MDL Unit Prepared Analyzed Dil Fac 06/03/16 08:45 06/06/16 16:33 **Antimony** 0.85 U 2.5 0.85 ug/L

Lab Sample ID: LCS 400-308303/2-A ^1 Matrix: Water Analysis Batch: 308895	Spike	LCS	LCS	Clie	nt Sai	mple ID	Prep Type: Total/NA Prep Batch: 308303 %Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	56.5		ug/L		113	85 - 115

Lab Sample ID: 400-122209-F-1-B MS ^5

Matrix: Water									Prep Type: Total/NA
Analysis Batch: 308895									Prep Batch: 308303
-	Sample	Sample	Spike	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Antimony	0.85	U	50.0	56.7		ug/L		113	70 - 130

TestAmerica Pensacola

Client Sample ID: Method Blank

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 308303

QC Sample Results

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122209-F-1-C MSD ^5 Matrix: Water

Method: 200.8 - Metals (ICP/MS) (Continued)

Analysis Batch: 308895

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 308303

Sample Sample Spike MSD MSD %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit 0.85 U 50.0 56.0 70 - 130 1 20 Antimony ug/L 112

А

5

0

8

46

11

13

4

TestAmerica Job ID: 400-122302-1

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

GC/MS VOA

Analysis Batch: 308608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122302-1	C5ES-MW0010I-022.5-20160527	Total/NA	Water	8260B	_
400-122302-1 MS	C5ES-MW0010I-022.5-20160527	Total/NA	Water	8260B	
400-122302-1 MSD	C5ES-MW0010I-022.5-20160527	Total/NA	Water	8260B	
400-122302-2	C5ES-MW0012S-012.5-20160527	Total/NA	Water	8260B	
400-122302-3	C5ES-MW0012I-022.5-20160527	Total/NA	Water	8260B	
400-122302-5	C5ES-MW0018S-009.5-20160527	Total/NA	Water	8260B	
400-122302-6	C5ES-MW0019I-018.0-20160527	Total/NA	Water	8260B	
400-122302-9	MLPV-IW0006IR-030.5-20160526	Total/NA	Water	8260B	
400-122302-10	MLPV-IW0009I-030.5-20160526	Total/NA	Water	8260B	
400-122302-11	MLPV-IW0009D-047.5-20160526	Total/NA	Water	8260B	
400-122302-12	MLPV-IW0012I-037.5-20160526	Total/NA	Water	8260B	
400-122302-13	MLPV-IW0012D-047.5-20160526	Total/NA	Water	8260B	
400-122302-14	MLPV-IW0018D-052.5-20160525	Total/NA	Water	8260B	
400-122302-15	MLPV-IW0028I-030.5-20160526	Total/NA	Water	8260B	
400-122302-16	MLPV-IW0029D-044.5-20160526	Total/NA	Water	8260B	
400-122302-17	MLPV-IW0046-040.0-20160526	Total/NA	Water	8260B	
400-122302-18	MLPV-IW0047-040.0-20160526	Total/NA	Water	8260B	
400-122302-19	MLPV-IW0048-045.0-20160526	Total/NA	Water	8260B	
400-122302-37	MLPV-SAMW0001-045.5-20160524	Total/NA	Water	8260B	
400-122302-38	MLPV-SAMW0003-045.5-20160524	Total/NA	Water	8260B	
LCS 400-308608/1002	Lab Control Sample	Total/NA	Water	8260B	
MB 400-308608/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 308665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122302-4	C5ES-MW0017S-009.5-20160527	Total/NA	Water	8260B	_
400-122302-4 MS	C5ES-MW0017S-009.5-20160527	Total/NA	Water	8260B	
400-122302-4 MSD	C5ES-MW0017S-009.5-20160527	Total/NA	Water	8260B	
400-122302-20	MLPV-IW0049-043.0-20160525	Total/NA	Water	8260B	
400-122302-21	MLPV-IW0050-045.0-20160525	Total/NA	Water	8260B	
400-122302-22	MLPV-IW0051-050.0-20160525	Total/NA	Water	8260B	
400-122302-23	MLPV-IW0052-045.0-20160526	Total/NA	Water	8260B	
400-122302-24	MLPV-IW0053-040.0-20160526	Total/NA	Water	8260B	
400-122302-25	MPLV-IW0054-045.0-20160526	Total/NA	Water	8260B	
400-122302-27	MPLV-IW0056-035.0-20160525	Total/NA	Water	8260B	
400-122302-28	PCCA-MW0004-010.0-20160525	Total/NA	Water	8260B	
400-122302-29	PCCA-MW0017-020.0-20160525	Total/NA	Water	8260B	
400-122302-30	PRES-IW0007I-034.5-20160525	Total/NA	Water	8260B	
400-122302-31	PRES-IW0009-045.0-20160525	Total/NA	Water	8260B	
400-122302-32	PRES-IW0010-045.0-20160525	Total/NA	Water	8260B	
400-122302-33	SATV-IW0009I-024.5-20160525	Total/NA	Water	8260B	
400-122302-34	SATV-IW00010-040.0-20160525	Total/NA	Water	8260B	
400-122302-35	WCPS-IW0001SR-007.5-20160526	Total/NA	Water	8260B	
400-122302-36	WCPS-IW0016-020.0-20160526	Total/NA	Water	8260B	
LCS 400-308665/1002	Lab Control Sample	Total/NA	Water	8260B	
MB 400-308665/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 308685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122302-46	FDTL-IW0015S-010.0-20160526	Total/NA	Water	8260B	
400-122302-47	FDTL-IW0017I-015.0-20160526	Total/NA	Water	8260B	

QC Association Summary

Client: Geosyntec Consultants, Inc.

TestAmerica Job ID: 400-122302-1

Project/Site: VAB-LTM

GC/MS VOA (Continued)

Analysis Batch: 308685 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122302-48	FDTL-IW0019I-015.0-20160526	Total/NA	Water	8260B	<u> </u>
400-122302-49	TRIP BLANK	Total/NA	Water	8260B	
400-122450-A-5 MS	Matrix Spike	Total/NA	Water	8260B	
400-122450-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 400-308685/1002	Lab Control Sample	Total/NA	Water	8260B	
MB 400-308685/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 308687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
400-122302-39	FS6-MW0001-030.0-20160525	Total/NA	Water	8260B	
400-122302-40	FS6-MW0003-025.0-20160525	Total/NA	Water	8260B	
400-122302-41	FDTL-IW0007I-015.0-20160526	Total/NA	Water	8260B	
400-122302-42	FDTL-IW0008I-015.0-20160526	Total/NA	Water	8260B	
400-122302-43	FDTL-IW0009I-015.0-20160526	Total/NA	Water	8260B	
400-122302-44	FDTL-IW0013I-015.0-20160526	Total/NA	Water	8260B	
400-122302-45	FDTL-IW0014I-015.0-20160526	Total/NA	Water	8260B	
400-122488-A-12 MS	Matrix Spike	Total/NA	Water	8260B	
400-122488-A-12 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 400-308687/1002	Lab Control Sample	Total/NA	Water	8260B	
MB 400-308687/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 308873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122302-26	MPLV-IW0055-045.0-20160525	Total/NA	Water	8260B	
400-122491-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
400-122491-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 400-308873/1002	Lab Control Sample	Total/NA	Water	8260B	
MB 400-308873/13	Method Blank	Total/NA	Water	8260B	

Metals

Prep Batch: 308303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122209-F-1-B MS ^5	Matrix Spike	Total/NA	Water	200.8	
400-122209-F-1-C MSD ^5	Matrix Spike Duplicate	Total/NA	Water	200.8	
400-122302-7 - RA	SFOC-IW0001S-008.5-20160524	Total/NA	Water	200.8	
400-122302-8 - RA	SFOC-IW0004S-007.5-20160524	Total/NA	Water	200.8	
LCS 400-308303/2-A ^1	Lab Control Sample	Total/NA	Water	200.8	
MB 400-308303/1-A ^5	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 308895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122209-F-1-B MS ^5	Matrix Spike	Total/NA	Water	200.8	308303
400-122209-F-1-C MSD ^5	Matrix Spike Duplicate	Total/NA	Water	200.8	308303
400-122302-7 - RA	SFOC-IW0001S-008.5-20160524	Total/NA	Water	200.8	308303
400-122302-8 - RA	SFOC-IW0004S-007.5-20160524	Total/NA	Water	200.8	308303
LCS 400-308303/2-A ^1	Lab Control Sample	Total/NA	Water	200.8	308303
MB 400-308303/1-A ^5	Method Blank	Total/NA	Water	200.8	308303

Client: Geosyntec Consultants, Inc.

Client Sample ID: C5ES-MW0010I-022.5-20160527

Project/Site: VAB-LTM

Lab Sample ID: 400-122302-1

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Date Collected: 05/27/16 11:00

Date Received: 05/28/16 09:48

Prepared Dilution Batch Batch Batch Method Factor Number or Analyzed **Prep Type** Type Run Analyst Lab TAL PEN Total/NA Analysis 8260B 308608 06/04/16 12:50 WPD

Client Sample ID: C5ES-MW0012S-012.5-20160527 Lab Sample ID: 400-122302-2

Date Collected: 05/27/16 11:30

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch **Prepared Prep Type** Type Method Run Factor Number or Analyzed Analyst Lab TAL PEN Total/NA 8260B 308608 06/04/16 13:15 WPD Analysis

Client Sample ID: C5ES-MW0012I-022.5-20160527 Lab Sample ID: 400-122302-3

Date Collected: 05/27/16 11:25

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Method or Analyzed **Prep Type** Type Run **Factor** Number Analyst Lab Analysis 8260B 308608 06/04/16 13:39 WPD TAL PEN Total/NA

Lab Sample ID: 400-122302-4 Client Sample ID: C5ES-MW0017S-009.5-20160527

Date Collected: 05/27/16 11:15

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Method Number or Analyzed **Prep Type** Type Run **Factor** Analyst Lab 8260B 308665 06/05/16 08:47 WPD TAL PEN Total/NA Analysis

Client Sample ID: C5ES-MW0018S-009.5-20160527 Lab Sample ID: 400-122302-5

Date Collected: 05/27/16 11:10

Date Received: 05/28/16 09:48

Dilution Batch Batch Batch Prepared Method Number or Analyzed Prep Type Type Run **Factor Analyst** Lab Total/NA Analysis 8260B 308608 06/04/16 14:27 WPD TAI PFN

Client Sample ID: C5ES-MW0019I-018.0-20160527 Lab Sample ID: 400-122302-6

Date Collected: 05/27/16 11:20

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Method Run Number or Analyzed **Prep Type** Type **Factor** Analyst Lab Total/NA Analysis 8260B 308608 06/04/16 14:51 WPD TAL PEN

Project/Site: VAB-LTM

Client Sample ID: SFOC-IW0001S-008.5-20160524

Date Collected: 05/24/16 10:59 Date Received: 05/28/16 09:48

Lab Sample ID: 400-122302-7

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Batch Dilution Batch Batch Prepared **Prep Type** Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 200.8 RA 308303 06/03/16 08:45 RJB TAL PEN Total/NA Analysis 200.8 RA 5 308895 06/06/16 17:05 GKP TAL PEN

Client Sample ID: SFOC-IW0004S-007.5-20160524 Lab Sample ID: 400-122302-8

Date Collected: 05/24/16 10:08 Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch** Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep 200.8 RA 308303 06/03/16 08:45 RJB TAL PEN Total/NA Analysis 200.8 RA 5 308895 06/06/16 17:27 **GKP** TAL PEN

Client Sample ID: MLPV-IW0006IR-030.5-20160526 Lab Sample ID: 400-122302-9

Date Collected: 05/26/16 09:50

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Method or Analyzed **Prep Type** Type Run **Factor** Number Analyst Lab Total/NA Analysis 8260B 308608 06/04/16 15:17 WPD TAL PEN

Client Sample ID: MLPV-IW0009I-030.5-20160526 Lab Sample ID: 400-122302-10

Date Collected: 05/26/16 10:10

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch **Prepared Prep Type** Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 308608 06/04/16 15:43 WPD TAL PEN

Client Sample ID: MLPV-IW0009D-047.5-20160526 Lab Sample ID: 400-122302-11

Date Collected: 05/26/16 10:15

Date Received: 05/28/16 09:48

Dilution Batch Batch Batch Prepared Prep Type Method Factor Number or Analyzed Type Run Analyst WPD TAL PEN Total/NA Analysis 8260B 308608 06/04/16 16:09

Client Sample ID: MLPV-IW0012I-037.5-20160526 Lab Sample ID: 400-122302-12

Date Collected: 05/26/16 10:35 Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch**

Prepared Method Number or Analyzed **Prep Type** Type Run **Factor** Analyst Lab Total/NA Analysis 8260B 308608 06/04/16 16:36 WPD TAL PEN

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Date Collected: 05/26/16 10:40 Matrix: Water

Date Received: 05/28/16 09:48

Dilution Batch Batch Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Total/NA Analysis 8260B 308608 06/04/16 17:01 WPD TAL PEN

Client Sample ID: MLPV-IW0018D-052.5-20160525 Lab Sample ID: 400-122302-14

Date Collected: 05/25/16 14:43

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch Prepared** Prep Type Type Method Run Factor Number or Analyzed **Analyst** Lab Total/NA 06/04/16 17:28 WPD TAL PEN 8260B 308608 Analysis

Date Collected: 05/26/16 11:00

Date Received: 05/28/16 09:48

Ratch Ratch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab 8260B 308608 06/04/16 17:54 WPD TAL PEN Total/NA Analysis

Client Sample ID: MLPV-IW0029D-044.5-20160526 Lab Sample ID: 400-122302-16

Date Collected: 05/26/16 10:50

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch** Prepared Method or Analyzed Run **Factor** Number Analyst Prep Type Type Lab TAL PEN 8260B 06/04/16 18:20 WPD Total/NA Analysis 308608

Client Sample ID: MLPV-IW0046-040.0-20160526 Lab Sample ID: 400-122302-17

Date Collected: 05/26/16 10:55

Date Received: 05/28/16 09:48

Batch Batch Batch Dilution Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 308608 06/04/16 18:46 WPD TAL PEN

Client Sample ID: MLPV-IW0047-040.0-20160526 Lab Sample ID: 400-122302-18

Date Collected: 05/26/16 11:10 Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Analysis 8260B 06/04/16 19:11 WPD TAL PEN

Project/Site: VAB-LTM

Lab Sample ID: 400-122302-19

Client Sample ID: MLPV-IW0048-045.0-20160526

Matrix: Water

Date Collected: 05/26/16 11:25 Date Received: 05/28/16 09:48

Dilution Batch Batch Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Total/NA Analysis 8260B 308608 06/04/16 19:37 WPD TAL PEN

Client Sample ID: MLPV-IW0049-043.0-20160525 Lab Sample ID: 400-122302-20

Matrix: Water

Date Collected: 05/25/16 14:34 Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch Prepared**

Prep Type Type Method Run Factor Number or Analyzed **Analyst** Lab 06/05/16 10:25 WPD TAL PEN Total/NA 8260B 308665 Analysis

Client Sample ID: MLPV-IW0050-045.0-20160525 Lab Sample ID: 400-122302-21

Date Collected: 05/25/16 14:58 **Matrix: Water**

Date Received: 05/28/16 09:48

Ratch Ratch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab 8260B 06/05/16 10:50 WPD TAL PEN Total/NA Analysis 308665

Client Sample ID: MLPV-IW0051-050.0-20160525 Lab Sample ID: 400-122302-22

Date Collected: 05/25/16 15:10 **Matrix: Water**

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch** Prepared Method or Analyzed Run **Factor** Number Analyst Prep Type Type Lab TAL PEN 8260B 308665 06/05/16 11:15 WPD Total/NA Analysis

Client Sample ID: MLPV-IW0052-045.0-20160526 Lab Sample ID: 400-122302-23

Date Collected: 05/26/16 11:55 **Matrix: Water**

Date Received: 05/28/16 09:48

Batch Batch Batch Dilution Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 308665 06/05/16 11:39 WPD TAL PEN

Client Sample ID: MLPV-IW0053-040.0-20160526 Lab Sample ID: 400-122302-24

Date Collected: 05/26/16 10:20 **Matrix: Water** Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared

Factor **Prep Type** Type Method Run Number or Analyzed Analyst Lab Total/NA Analysis 8260B 06/05/16 12:03 WPD TAL PEN

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Lab Sample ID: 400-122302-25

Client Sample ID: MPLV-IW0054-045.0-20160526 Date Collected: 05/26/16 11:20 **Matrix: Water**

Date Received: 05/28/16 09:48

Dilution Batch Batch Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst

Total/NA Analysis 8260B 308665 06/05/16 12:29 WPD TAL PEN

Client Sample ID: MPLV-IW0055-045.0-20160525 Lab Sample ID: 400-122302-26

Date Collected: 05/25/16 16:08 **Matrix: Water**

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch Prepared** Prep Type Type Method Run Factor Number or Analyzed **Analyst** Lab Total/NA TAL PEN 8260B 308873 06/07/16 14:34 WPD Analysis

Client Sample ID: MPLV-IW0056-035.0-20160525 Lab Sample ID: 400-122302-27

Date Collected: 05/25/16 14:21 **Matrix: Water**

Date Received: 05/28/16 09:48

Ratch Ratch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab 8260B 06/05/16 13:21 WPD TAL PEN Total/NA Analysis 308665

Client Sample ID: PCCA-MW0004-010.0-20160525 Lab Sample ID: 400-122302-28

Date Collected: 05/25/16 15:48 **Matrix: Water**

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch** Prepared Method or Analyzed Run **Factor** Number Analyst Prep Type Type Lab 8260B 308665 06/05/16 13:47 WPD TAL PEN Total/NA Analysis

Client Sample ID: PCCA-MW0017-020.0-20160525 Lab Sample ID: 400-122302-29

Date Collected: 05/25/16 15:56 **Matrix: Water**

Date Received: 05/28/16 09:48

Batch Batch Batch Dilution Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 308665 06/05/16 14:13 WPD TAL PEN

Client Sample ID: PRES-IW0007I-034.5-20160525 Lab Sample ID: 400-122302-30

Date Collected: 05/25/16 14:07 **Matrix: Water** Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared

Prep Type Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Analysis 8260B 06/05/16 14:39 WPD TAL PEN

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Client Sample ID: PRES-IW0009-045.0-20160525

Date Collected: 05/25/16 11:45 Date Received: 05/28/16 09:48

Lab Sample ID: 400-122302-31

Matrix: Water

Batch Batch

Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Total/NA Analysis 8260B 308665 06/05/16 15:05 WPD TAL PEN

Lab Sample ID: 400-122302-32

Client Sample ID: PRES-IW0010-045.0-20160525 Date Collected: 05/25/16 13:53 **Matrix: Water**

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch Prepared** Prep Type Type Method Run Factor Number or Analyzed **Analyst** Lab Total/NA TAL PEN 8260B 308665 06/05/16 15:31 WPD Analysis

Client Sample ID: SATV-IW0009I-024.5-20160525 Lab Sample ID: 400-122302-33

Date Collected: 05/25/16 15:28

Date Received: 05/28/16 09:48

Matrix: Water

Matrix: Water

Matrix: Water

Ratch Ratch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab 8260B 06/05/16 15:57 WPD TAL PEN Total/NA Analysis 308665

Client Sample ID: SATV-IW00010-040.0-20160525 Lab Sample ID: 400-122302-34

Date Collected: 05/25/16 15:40

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Method or Analyzed Run **Factor** Number Analyst Prep Type Type Lab 8260B 308665 06/05/16 16:23 WPD TAL PEN Total/NA Analysis

Client Sample ID: WCPS-IW0001SR-007.5-20160526 Lab Sample ID: 400-122302-35

Date Collected: 05/26/16 11:45

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 308665 06/05/16 16:49 WPD TAL PEN

Client Sample ID: WCPS-IW0016-020.0-20160526 Lab Sample ID: 400-122302-36

Date Collected: 05/26/16 11:40 **Matrix: Water** Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Analysis 8260B 06/05/16 17:15 WPD TAL PEN

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 400-122302-40

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Lab Sample ID: 400-122302-37

Client Sample ID: MLPV-SAMW0001-045.5-20160524 Date Collected: 05/24/16 11:55 **Matrix: Water**

Date Received: 05/28/16 09:48

Dilution Batch Batch Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Total/NA Analysis 8260B 308608 06/04/16 10:49 WPD TAL PEN

Client Sample ID: MLPV-SAMW0003-045.5-20160524 Lab Sample ID: 400-122302-38

Date Collected: 05/24/16 13:19

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch Prepared** Prep Type Type Method Run Factor Number or Analyzed **Analyst** Lab Total/NA TAL PEN 8260B 308608 06/04/16 11:14 WPD Analysis

Client Sample ID: FS6-MW0001-030.0-20160525 Lab Sample ID: 400-122302-39

Date Collected: 05/25/16 10:03

Date Received: 05/28/16 09:48

Ratch Ratch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab 8260B 06/06/16 16:48 CLN TAL PEN Total/NA Analysis 308687

Client Sample ID: FS6-MW0003-025.0-20160525

Date Collected: 05/25/16 10:24

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Method or Analyzed Run **Factor** Number Analyst Prep Type Type Lab TAL PEN 8260B 06/06/16 17:15 CLN Total/NA Analysis 308687

Client Sample ID: FDTL-IW0007I-015.0-20160526 Lab Sample ID: 400-122302-41

Date Collected: 05/26/16 13:15

Date Received: 05/28/16 09:48

Batch Batch Batch Dilution Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 308687 06/06/16 17:41 CLN TAL PEN

Client Sample ID: FDTL-IW0008I-015.0-20160526 Lab Sample ID: 400-122302-42

Date Collected: 05/26/16 13:35

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Analysis 8260B 06/06/16 18:08 CLN TAL PEN

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

Date Collected: 05/26/16 13:05 Matrix: Water

Date Received: 05/28/16 09:48

Dilution Batch Batch Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Total/NA Analysis 8260B 308687 06/06/16 18:34 CLN TAL PEN

Client Sample ID: FDTL-IW0013I-015.0-20160526 Lab Sample ID: 400-122302-44

Date Collected: 05/26/16 14:05

Date Received: 05/28/16 09:48

Batch Batch Dilution **Batch Prepared** Prep Type Type Method Run Factor Number or Analyzed **Analyst** Lab Total/NA 06/06/16 19:00 TAL PEN 8260B 308687 CLN Analysis

Client Sample ID: FDTL-IW0014I-015.0-20160526 Lab Sample ID: 400-122302-45

Date Collected: 05/26/16 14:00

Date Received: 05/28/16 09:48

Ratch Ratch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed **Analyst** Lab 8260B 06/06/16 19:26 CLN TAL PEN Total/NA Analysis 308687

Client Sample ID: FDTL-IW0015S-010.0-20160526 Lab Sample ID: 400-122302-46

Date Collected: 05/26/16 13:20

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared Method or Analyzed Run **Factor** Number Analyst Prep Type Type Lab TAL PEN 8260B 308685 06/06/16 10:36 CLN Total/NA Analysis

Client Sample ID: FDTL-IW0017I-015.0-20160526 Lab Sample ID: 400-122302-47

Date Collected: 05/26/16 14:15

Date Received: 05/28/16 09:48

Batch Batch Batch Dilution Prepared Prep Type Type Method Run Factor Number or Analyzed Analyst Lab Total/NA Analysis 8260B 308685 06/06/16 11:02 CLN TAL PEN

Client Sample ID: FDTL-IW0019I-015.0-20160526 Lab Sample ID: 400-122302-48

Date Collected: 05/26/16 13:30

Date Received: 05/28/16 09:48

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Lab Total/NA Analysis 8260B 06/06/16 11:26 CLN TAL PEN

Lab Chronicle

Client: Geosyntec Consultants, Inc.

Date Received: 05/28/16 09:48

Client Sample ID: TRIP BLANK

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Lab Sample ID: 400-122302-49

Date Collected: 05/28/16 00:00 **Matrix: Water**

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number or Analyzed Analyst Total/NA Analysis 8260B 308685 06/06/16 10:12 CLN TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Certification Summary

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Laboratory: TestAmerica Pensacola

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E81010	06-30-16

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Method Summary

Client: Geosyntec Consultants, Inc.

Project/Site: VAB-LTM

TestAmerica Job ID: 400-122302-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
200.8	Metals (ICP/MS)	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

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Toward ET 22624				ر	Пап		<u>Y</u> -	cora		THE LEADER	THE LEADER IN ENVIRONMENTAL TESTING
Lampa, FL 33034 Phone (813) 885-7427 Fax (813) 885-7049										TestAmeric	TestAmerica Laboratories, Inc.
Client Contact	Project Ma	Project Manager: Crystal Towns	stal Towns		S	Site Contact:		Date:		COC No:	
Geosyntec Consultants	Tel/Fax: 85	Tel/Fax: 850-483-5102			I	Lab Contact: Amy Atkins	y Atkins	Carrier:		jo)	\$200 7
6770 S. Washington Ave.		Analysis Turnaround Time	ırnaround	Time	522.3	any in				Job No.	
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Phone: 321-269-5880	TAT	TAT if different from Below		standard	e de choi	5					
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MLPV-IW0006IR-030.5-20160526	5/26/16	05:60	G	M	3 N	3		-			_
MLPV-IW0008H-030.5-20160526	5/26/16	10:10	Ŋ	Μ	3	3					
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MLPV-IW0012I-037.5-20160526	5/26/16	10:35	G	М	3 N	3					-
1: 1= Ice, 2= HCl; 3= H2SO4;	4=HNO3; 5=NaOH; 6= Other)H; 6= Oth	ar			2 4					
Possible Hazard Identification Non-Hazard Flammable Skin Irritant	Poison B	B	Unknown			Sample Disposal (A i	osal (A 1 Fo Client	ee may be assessed if sa Disposal By Lab	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Month	ned longer than ve For	1 month) Months
Special Instructions/QC Requirements & Comments: Use full sample name on COC. Email EDDs to Crystal Towns (ctowns@geosyntec.com)	ole name on	СОС. Епа	ll EDDs to	Crystal T	owns (cto	wns@geosyntec.	com)				
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TestAmerica Mobile 6712 Benjamin Road Suite 100

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

TestAmerica Mobile

6712 Benjamin Road

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1ampa, FL 53654 Phone (813) 885-7427 Fax (813) 885-7049											Tes	tAmerica]	TestAmerica Laboratories, Inc.
Client Contact	Project Manager: Crystal Towns	nager: Cry	stal Towns		S	Site Contact:	#		Date:		000	COC No:	
Geosyntec Consultants	Tel/Fax: 850-483-5102	0-483-5102			ř	b Conta	Lab Contact: Amy Atkins	ins	Carrier:		la	Jo 2	ر درده
6770 S. Washington Ave.	7	Analysis To	Analysis Turnaround Time	ìme	À.S			_			qor	Job No.	
Titusville, FL 32780	Calendar (Calendar (C) or Work Days (W)	k Days (W)	W									-
Phone: 321-269-5880	TAT if	different from	Below standard	ard	1								
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MLPV-IW0029D-044.5-20160526	2/56/16	10:50	Ŋ	W	8 Z	3							-
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MLPV-IW0052-045.0-20160526	5/26/16	11:55	G	W	3 N	3							-
MLPV-IW0053-040.0-20160526	5/26/16	10:20	Ð	Μ	3 N	3							
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Date/Time:

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Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING TestAmerica Laboratories, Inc. TestAmerica Mobile
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Phone (813) 885-7427 Fax (813) 885-7049

Geosyntec Consultants Tel 6770 S. Washington Ave. Titusville, FL 32780 C.	Tel/Fax: 850-483-5102	3-5102			-				•				•		
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PCCA-MW0004-010.0-20160525	5/25/16 1:	15:48	G W	V 3	N 3										
PCCA-MW0017-020.0-20160525	5/25/16 1:	15:56	G W	V 3	N 3										
PRES-IW0007-034.5-20160525	5/25/16 14	14:07	G W	V 3	N 3		-								
PRES-IW0009-045.0-20160525	5/25/16	11:45	G W	V 3	N 3										
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WCPS-IW0001SR-007.5-20160526	5/26/16 11	11:45	G W	3	N 3										
WCPS-IW0016-020.0-20160526	5/26/16 11	11:40	B W	3	N 3										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other	5=NaOH;	= Other			2							-			
Possible Hazard Identification Non-Hazard Flammable Skin Irritant	Poison B	Units	Опкломп		Sar	nple Dis	le Disposal (A 1 Return To Client	A fee ma	ny be as:	e assessed if sa Disposal By Lab	f sample	s are ret	retained long	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By ah	month)

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Phone (813) 885-7427 Fax (813) 885-7049			i										<u> </u>	estAmeri	ca Labor	TestAmerica Laboratories, Inc.
Client Contact	Project Ma	mager: Cry	Project Manager: Crystal Towns		Si	Site Contact:	iii		<u>a</u>	Date:			Ö	COC No:		
Geosyntec Consultants	Tel/Fax: 850-483-5102	50-483-510	2		L,	Lab Contact: Amy Atkins	t: Amy	ktkiņs	C	Carrier:				Ç,	1	cocs
6770 S. Washington Ave.		Analysis T	Analysis Turnaround Time	Time	200		_		F	L		_	<u>ې</u>	Job No.		
Titusville, FL 32780	Calendar	(C) or Wor	Calendar (C) or Work Days (W)	W												
Phone: 321-269-5880	TAT	IAT if different from Below		standard		į										
Fax 321-269-5813		73	2 weeks)) (CC	_						S.	SDG No.		
B LTM (FR0749D/03)		Π	I week		ale. T	Im0			-							
Site: MLPV, Kennedy Space Center		• • •	2 days			≯ x€					••••					
PO#		1	1 day		Jagg	'(H 0!					_					
Somulo Hastification	Sample	Sample	Sample Tyne	Matrix	(10.69.2) \$ \$	7OCs (826 otal Anti			*****					S	S of an	N
MLPV-SAMW0001-045 5-20160524	5/24/16	11:55	g	M	7	<u>س</u>			 	#-					Sample Specific Action	in indicase
MLPV-SAMW0003-045.5-20160524	5/24/16	13:19	g	A	3	8										į
FS6-MW0001-030.0-20160525	5/25/16	10:03	b	₿	8	3										ė.
FS6-MW0003-025.0-20160525	5/25/16	10:24	Ð	A	3 Z	3										
FDTL-IW0007I-015.0-20160526	5/26/16	13:15	G	Μ	3	3										
FDTL-IW0008I-015.0-20160526	5/26/16	13:35	Ð	W	3 N	3										
FDTL-1W00091-015.0-20160526	5/26/16	13:05	Ð	W	3 N	3										
FDTL-IW0013I-015.0-20160526	5/26/16	14:05	G	M	3 N	3	_									
FDTL-IW0014I-015.0-20160526	5/26/16	14:00	Ð	W	3 N	3										
FDTL-IW0015S-010.0-20160526	5/26/16	13:20	Ð	W	3 N	3										
FDTL-IW0017I-015.0-20160526	5/26/16	14:15	Ð	W	3 N	3										
FDTL-IW0019I-015.0-20160526	5/26/16	13:30	ß	×	S Z	3										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HN	NO3; 5=NaOH; 6= Other)H; 6= Otb	ier			2			 			\square				
Possible Hazard Identification Non-Hazard Flammable Skin Irritant	Poison B	В	Unknown			Sample	le Disposal (A Return To Client	Sample Disposal (A fee may be assessed it samples are refained longer than 1 month) Return To Client Disposal By Lab Archive For Month.	nay be as Dis	e assessed if sa Disposal By Lab	r t samp i Lab	es are re A	retained lo Archive For	nger tha	n 1 month) Months	رار hs
Special Instructions/QC Requirements & Comments:									!							
Reinquished by:	Company: SWEC	JAMEC .		Date/Time: 748 Received by:	37.2	Received		1	12	\ <u>\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \</u>	Company	1		Darring.	_	930
Refinances by:	Company:		ر, ا	Date/Time:	3.5	Received	N	N		Ö	Company	77) av	Date/Time:	1	160 9

TestAmerica Mobile

Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 400-122302-1

Login Number: 122302 List Source: TestAmerica Pensacola

List Number: 1

Creator: Crawford, Lauren E

ordator. Ordanora, Eddron E		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.9°C, 0.7°C IR-6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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APPENDIX D MAROS OUTPUT

Project: VAB Area LTM User Name:

Location: Kennedy Space Center State: Florida

Time Period: 12/15/1997 to 5/28/2016 Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

Well VINYL CHLORIDE	Source/ Tail	Number of Samples	Number of Detects	Coefficient of Variation	Mann-Kendall Statistic	Confidence in Trend	All Samples "ND" ?	Concentration Trend
C5ES-MW12I	S	28	24	1.21	-226	100.0%	No	
C5ES-MW10I	S	28	24	1.34	-179	100.0%	No	D
C5ES-MW19I	Т	13	13	0.44	-21	88.6%	No	S
C5ES-MW18S	3 T	27	27	0.51	98	97.9%	No	1
C5ES-MW17S	S T	27	23	1.44	-270	100.0%	No	D
C5ES-MW12S	3 T	28	23	2.71	-155	99.9%	No	D

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name: Crystal Towns

Location: Kennedy Space Center State: Florida

Time Period: 5/14/2009 to 5/28/2016 Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

Well VINYL CHLORIDE	Source/ Tail	Number of Samples	Number of Detects	Coefficient of Variation	Mann-Kendall Statistic	Confidence in Trend	All Samples "ND" ?	Concentration Trend
C5ES-MW12S	S S	10	6	1.10	-6	66.8%	No	NT
C5ES-MW12I	S	10	7	1.10	-28	99.4%	No	D
C5ES-MW10I	S	10	8	1.81	-27	99.2%	No	D
C5ES-MW19I	Т	10	10	0.51	6	66.8%	No	NT
C5ES-MW18S	3 T	10	10	0.43	-18	93.4%	No	PD
C5ES-MW17S	S T	10	7	1.05	-36	100.0%	No	D

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name: Crystal Towns

Location: Kennedy Space Center State: Florida

Time Period: 5/9/2011 to 5/28/2016
Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

Well	Source/ Tail	Number of Samples	Number of Detects	Coefficient of Variation	Mann-Kendall Statistic	Confidence in Trend	All Samples "ND" ?	Concentration Trend
VINYL CHLORIDE								
C5ES-MW17S	s s	6	3	0.92	-10	95.2%	No	D
C5ES-MW12S	S S	6	3	1.40	-6	81.5%	No	NT
C5ES-MW12I	S	6	3	1.07	-8	89.8%	No	NT
C5ES-MW10I	S	6	4	1.13	-5	76.5%	No	NT
C5ES-MW19I	Т	6	6	0.67	-8	89.8%	No	S
C5ES-MW18S	Т	6	6	0.46	-7	86.4%	No	S

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name: Crystal Towns

Location: Kennedy Space Center State: Florida

Time Period: 11/28/2012 to 5/28/2016 Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

Well VINYL CHLORIDE	Source/ Tail	Number of Samples	Number of Detects	Coefficient of Variation	Mann-Kendall Statistic	Confidence in Trend	All Samples "ND" ?	Concentration Trend
0550 184400						50.00/		
C5ES-MW128	s s	4	1	1.71	-1	50.0%	No	NT
C5ES-MW12I	S	4	1	1.46	-1	50.0%	No	NT
C5ES-MW10I	S	4	3	1.24	-6	95.8%	No	D
C5ES-MW19I	Т	4	4	0.95	-2	62.5%	No	S
C5ES-MW188	S T	4	4	0.61	-6	95.8%	No	D
C5ES-MW17S	S T	4	1	0.61	-1	50.0%	No	S

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name: Crystal Towns

Location: Kennedy Space Center State: Florida

Time Period: 3/1/2006 to 5/1/2016
Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

	Source/	Number of	Number of	Coefficient	Mann-Kendall	Confidence	All Samples	Concentration
Well	Tail	Samples	Detects	of Variation	Statistic	in Trend	"ND" ?	Trend
TRICHLOROETHYLEN	NE (TCE)							
FDTL-IW17I	S	8	4	1.76	7	76.4%	No	NT
FDTL-IW141	S	11	4	1.39	-14	84.0%	No	NT
FDTL-IW15S	s s	14	5	1.51	-4	56.4%	No	NT
FDTL-IW13I	S	12	10	0.84	-37	99.5%	No	D
FDTL-IW19I	Т	10	7	3.02	-30	99.7%	No	D
FDTL-IW7I	Т	16	16	1.95	-77	100.0%	No	D
FDTL-IW8I	Т	7	7	1.33	-21	100.0%	No	D
FDTL-IW9I	Т	14	14	1.20	-27	92.1%	No	PD
VINYL CHLORIDE								
FDTL-IW15S	S S	14	14	1.94	-40	98.5%	No	D
FDTL-IW141	S	11	0	0.00	0	46.9%	Yes	S
FDTL-IW13I	S	12	0	0.00	0	47.3%	Yes	S
FDTL-IW17I	S	8	0	0.00	0	45.2%	Yes	S
FDTL-IW19I	Т	10	10	0.61	16	90.7%	No	PI
FDTL-IW9I	Т	14	2	2.09	1	50.0%	No	NT
FDTL-IW7I	Т	14	4	2.11	14	75.8%	No	NT
FDTL-IW8I	Т	7	5	1.88	-6	76.4%	No	NT

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name: Crystal Towns

Location: Kennedy Space Center State: Florida

Time Period: 2/1/2011 to 5/1/2016
Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

	Source/	Number of	Number of	Coefficient	Mann-Kendall	Confidence	All Samples	Concentration
Well	Tail	Samples	Detects	of Variation	Statistic	in Trend	"ND" ?	Trend
TRICHLOROETHYLEN	IE (TCE)							
FDTL-IW141	S	6	1	2.12	-5	76.5%	No	NT
FDTL-IW15S	S	7	2	1.74	-9	88.1%	No	NT
FDTL-IW13I	S	7	5	1.10	-20	100.0%	No	D
FDTL-IW19I	Т	7	4	1.11	-8	84.5%	No	NT
FDTL-IW17I	Т	5	3	1.54	5	82.1%	No	NT
FDTL-IW7I	Т	7	7	0.57	-12	94.9%	No	PD
FDTL-IW8I	Т	2	2	0.00	0	0.0%	No	N/A
FDTL-IW9I	T	7	7	0.31	-9	88.1%	No	S
VINYL CHLORIDE								
FDTL-IW15S	S	7	7	0.54	9	88.1%	No	NT
FDTL-IW141	S	6	0	0.00	0	42.3%	Yes	S
FDTL-IW13I	S	7	0	0.00	0	43.7%	Yes	S
FDTL-IW19I	Т	6	6	0.46	6	81.5%	No	NT
FDTL-IW9I	Т	7	1	2.13	6	76.4%	No	NT
FDTL-IW7I	Т	6	2	1.54	7	86.4%	No	NT
FDTL-IW8I	Т	2	1	0.00	0	0.0%	No	N/A
FDTL-IW17I	Т	5	0	0.00	0	40.8%	Yes	S

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name: Crystal Towns

Location: Kennedy Space Center State: Florida

Time Period: 2/1/2011 to 5/1/2016
Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

	Source/	Number of	Number of	Coefficient	Mann-Kendall	Confidence	All Samples	Concentration
Well	Tail	Samples	Detects	of Variation	Statistic	in Trend	"ND" ?	Trend
TRICHLOROETHYLEN	IE (TCE)							
FDTL-IW17I	S	5	3	1.54	5	82.1%	No	NT
FDTL-IW141	S	6	1	2.12	-5	76.5%	No	NT
FDTL-IW15S	s s	7	2	1.74	-9	88.1%	No	NT
FDTL-IW13I	S	7	5	1.10	-20	100.0%	No	D
FDTL-IW19I	Т	7	4	1.11	-8	84.5%	No	NT
FDTL-IW7I	Т	7	7	0.57	-12	94.9%	No	PD
FDTL-IW8I	Т	2	2	0.00	0	0.0%	No	N/A
FDTL-IW9I	Т	7	7	0.31	-9	88.1%	No	S
VINYL CHLORIDE								
FDTL-IW15S	S	7	7	0.54	9	88.1%	No	NT
FDTL-IW141	S	6	0	0.00	0	42.3%	Yes	S
FDTL-IW13I	S	7	0	0.00	0	43.7%	Yes	S
FDTL-IW17I	S	5	0	0.00	0	40.8%	Yes	S
FDTL-IW19I	Т	7	7	0.50	10	90.7%	No	PI
FDTL-IW9I	Т	7	1	2.13	6	76.4%	No	NT
FDTL-IW7I	Т	6	2	1.54	7	86.4%	No	NT
FDTL-IW8I	Т	2	1	0.00	0	0.0%	No	N/A

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name: Crystal Towns

Location: Kennedy Space Center State: Florida

Time Period: 3/1/2012 to 5/1/2016
Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values: Actual Value

	Source/	Number of	Number of	Coefficient	Mann-Kendall	Confidence	All Samples	Concentration
Well	Tail	Samples	Detects	of Variation	Statistic	in Trend	"ND" ?	Trend
TRICHLOROETHYLEN	IE (TCE)							
FDTL-IW141	S	5	0	0.00	0	40.8%	Yes	S
FDTL-IW15S	S	5	1	2.24	-4	75.8%	No	NT
FDTL-IW13I	S	5	3	1.42	-9	97.5%	No	D
FDTL-IW19I	Т	5	2	1.37	-5	82.1%	No	NT
FDTL-IW17I	Т	4	2	1.45	5	89.6%	No	NT
FDTL-IW7I	Т	5	5	0.47	-1	50.0%	No	S
FDTL-IW8I	Т	1	1	0.00	0	0.0%	No	N/A
FDTL-IW9I	Т	5	5	0.19	-4	75.8%	No	S
VINYL CHLORIDE								
FDTL-IW15S	S	5	5	0.46	4	75.8%	No	NT
FDTL-IW141	S	5	0	0.00	0	40.8%	Yes	S
FDTL-IW13I	S	5	0	0.00	0	40.8%	Yes	S
FDTL-IW19I	Т	5	5	0.16	1	50.0%	No	NT
FDTL-IW9I	Т	5	1	1.91	4	75.8%	No	NT
FDTL-IW7I	Т	4	2	1.16	3	72.9%	No	NT
FDTL-IW8I	Т	1	1	0.00	0	0.0%	No	N/A
FDTL-IW17I	Т	4	0	0.00	0	37.5%	Yes	S

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)

Project: VAB Area LTM User Name:

Location: Kennedy Space Center State: Florida

Time Period: 12/15/1997 to 5/28/2016 Consolidation Period: No Time Consolidation

Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values: Actual Value

							All			
Well	Source/ Tail	Number of Samples	Number of Detects	Coefficient of Variation	Mann-Kendall Statistic	Confidence in Trend	Samples "ND" ?	Concentration Trend		
VINYL CHLORIDE										
WCPS-IW1SF	R S	15	15	0.79	18	79.6%	No	NT		
MLPV-IW9D	S	24	23	2.40	-70	95.6%	No	D		
MLPV-IW12I	S	23	20	0.66	-99	99.6%	No	D		
MLPV-IW12D	S	25	24	1.07	-178	100.0%	No	D		
SATV-IW9I	Т	19	15	0.81	-62	98.5%	No	D		
PRES-IW7I	Т	19	17	1.22	-109	100.0%	No	D		
PCCA-MW4	Т	13	10	0.63	-23	90.8%	No	PD		
PCCA-MW17	Т	13	10	0.98	-30	96.2%	No	D		
MLPV-MWS3	Т	8	7	1.71	10	86.2%	No	NT		
MLPV-MWS1	Т	8	7	0.72	-22	99.8%	No	D		
MLPV-IW9I	Т	22	21	1.13	-165	100.0%	No	D		
MLPV-IW6IR	Т	21	20	1.03	-180	100.0%	No	D		
MLPV-IW29D	Т	19	19	0.32	-101	100.0%	No	D		
MLPV-IW28I	Т	19	18	0.59	-108	100.0%	No	D		
MLPV-IW18D	Т	24	21	1.99	-16	64.4%	No	NT		

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A)-Due to insufficient Data (< 4 sampling events); Source/Tail (S/T)